

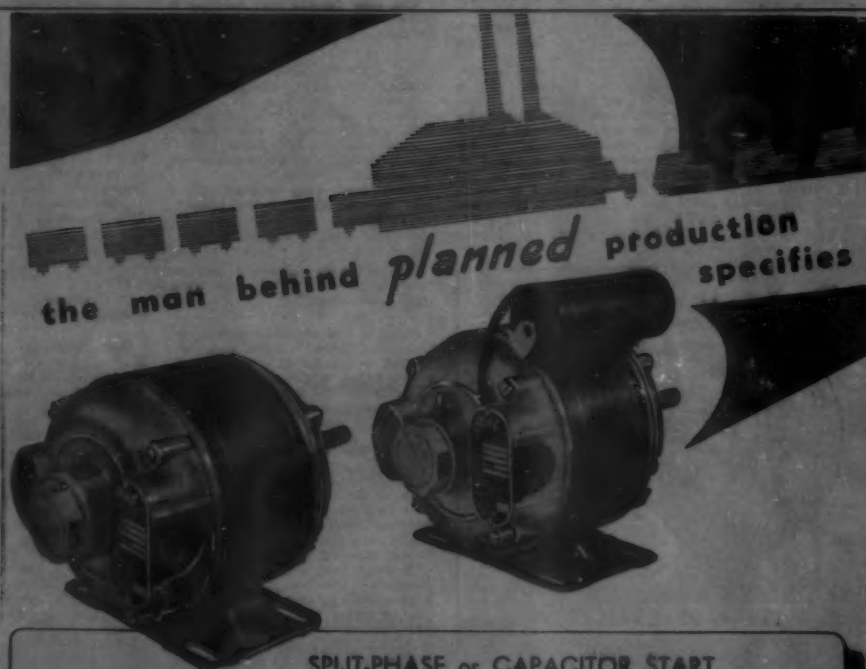
The Australasian MANUFACTURER

SERVING ALL INDUSTRY

Vol. XXV - No. 1808.

Registered at the G.P.O., Sydney, for
transmission by Post as a Newspaper.

Saturday, November 25, 1950.



SPLIT-PHASE or CAPACITOR START
FRACTIONAL H.P. by **B.G.E.**
MOTORS

B.G.E. single-phase motors, split-phase or capacitor start, are made at the B.G.E. Works in the most modern motor factory in Australia. Rigid G.E.C. specifications apply . . . highest quality materials and workmanship used . . . motors liberally rated to withstand arduous duty. Solid foot or resilient cradle mounting . . . built-in thermal overload protection if desired . . . suitable for 230, 240 or 250 volt, single-phase 50-cycle supply. Performance—high efficiency and high power factor achieved together with ample torque. Fully tested, guaranteed 12 months.
Range: 1, 2, 3 h.p., 1,440 r.p.m.

Further particulars and prices on application.



British General Electric Co. Pty. Ltd.
(Sole Australian Representatives of The General Electric Co. Ltd. of England)

SYDNEY . . . NEWCASTLE . . . MELBOURNE . . . ADELAIDE . . . BRISBANE
PERTH . . . HOBART . . . LAUNCESTON . . . TOWNSVILLE

AFTER BUSINESS HOURS

Here, There and Everywhere

(By William Beecham.)

The views expressed in articles published in this section are those of the contributors and not necessarily those of "The Australasian Manufacturer." They are selected for their interest value, whether controversial or not, and the comments of readers on the subject discussed are always welcomed by the Editor.

THAT PUBLIC WASH

In public washrooms taps will flow,
Then won't as soon as you let go;
Which makes it very nearly hopeless

To get yourself first soaped—then
soapsies.

The time you need patience
most of all is just when you lose
it.

An American business executive, speaking recently upon industrial relations, said: "There is grave doubt that the results for working men obtained through strikes, coercion and threats really result in any substantial

good that would not have been obtained through orderly processes. So much has been said, and continues to be said, by special pleaders and other interested propagandists about 'labour's gains' brought about by forceful methods, that I should like to examine that expression. Just what has labour gained? It is customary to include in the claims which are made everything the eye can see. I should like to challenge some of those. I believe, for example, that gains or betterments which accrue to all segments of society, and to which all of our citizens fall heir, are neither 'labour's gains' nor gains to which the efforts of labour

organisations may be cited for their attainment."

The only female that can get a mink coat for nothing is the female mink.

GOOD SPORTS.

They're shouting "Kill the umpire."

They're thirsting for his blood; Foul insults, venom, vile abuse.

Flow o'er him in a flood.
The screams are heard from all around.

From oval, ring and court,
And he who screams the loudest, prides
Himself that he's a sport.

If your wife described you as "a man of rare gifts," just what would she mean?

Back to our executive talking on "labour's gains." He goes on: "I find a second category of so-called gains, which upon examination cannot be construed as gains of any sort. A devaluation of our medium of exchange, which may result in more money in labour's pocket, but with less real worth and less purchasing power, represents a gain for nobody. The trick of asking people if it be not true that they have more money now and consequently are better off, is pure chicanery and deserves to be exposed.

"I deny that a gain has been registered when any organisation is permitted by law to forbid freedom of employment to others. Restriction upon the freedom of opportunity is a price too high to pay to claim therefrom a gain by the transaction. The strife and turmoil engendered by labour during the brief period since the end of the war has already cost us more in stature and prestige throughout the world than we may ever be able to retrieve. Can any one establish that by boorishness, violence, intolerance, disregard of law and contempt for courts any gains are made for labour?"

Much of this executive's line of thought might well apply to the Australian scene to-day. Certain organisations, in an overwhelming desire to gain the lion's share of everything that is going for themselves, do nothing but ill to the

bulk of workers in whose name their "gains" are won.

An English business college recently advertised a short course in accounting for women. But it has been withdrawn. For the college heads were inundated with notes, 'phone calls and the like to the effect: "There is no accounting for women."

PAINTING

When painting the furniture I spend all the day.

Youngsters take no time at all scratching it away;
But the paint that I carelessly slop on the floor.

Stays put for all to see—ever and evermore.

"To-morrow" is the world's greatest labour-saving device.

Our executive again has something to say: "The time has come for the nation to deal honestly but firmly with abuses. No one should be above the law. Any conspiracy to destroy property or cripple an industry should be punished, whether its authors are unions or corporations."

Those words are in many ways applicable in this country. Our industries are our very life-blood. All of us must work, and all of us must perforce work for somebody—for even the bosses work for the customers. Those who cripple industry are not crippling the bosses only, they are crippling their own fellow workers. Unless a firm makes a profit it cannot carry on. Unless it carries on it cannot continue to employ its workers. And the fact that to-day see more jobs than workers does not necessarily mean that this will always be the case.

Are you looking for a helping hand? Well, you won't find a better one than the one at the end of your own arm.

It is unfortunate that so many citizens in this country are demanding something for nothing—it is even more unfortunate that they are getting it.

(Turn to page 34.)

LOOK YOUR BEST!



STYLE PLUS QUALITY

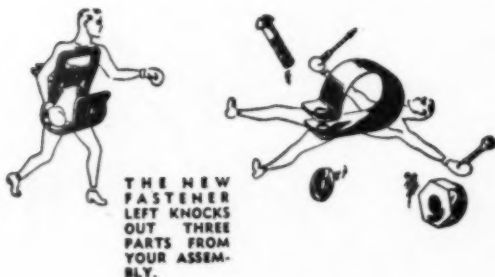
Everywhere you hear men praising the superb quality, style and smart appearance of Akubra Hats.

Made from the finest of pure fur, your Akubra retains its "New Look" and colour throughout its long, all-weather life.

AKUBRA
Hats of Quality

The DOT line of **TRIMOUNT** TUBING AND WIRING **CLIPS**

PREVIOUSLY IMPORTED FITTINGS NOW
BEING MADE IN AUSTRALIA!



Made in our Australian factory on Australian developed machines and employing all Australian material, "Trimount" Clips are already being used by many industries. These time-saving fasteners take the place of screwed-on clips for holding tubes and wires to their supporting structures.

"Trimount" Clips are economical, quickly attached and permanent. Every clip is rust-proof and will keep on doing a good job.

25 types of "Trimount" Clips are now available. Others will be added as required by manufacturers.

Applicable to these trades

APPLIANCE • ENGINEERING • RADIO
• ELECTRICAL • AUTOMOTIVE

CARR FASTENER

COMPANY OF AUSTRALIA LIMITED

Enquiries are invited from all trades requiring serviceable clips in modern design. Such enquiries should be addressed to the Company's Sales Engineers in Adelaide, Sydney or Melbourne.

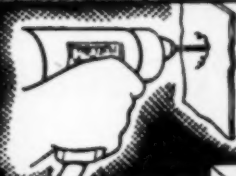
IN SYDNEY: Mr. S. B. Tonkin, 85 Commonwealth Street.

IN MELBOURNE: Mr. C. A. Muller, 355 William Street.

IN ADELAIDE: Carr Fastener Co. of Australia Limited,
Royal Park, Alberton 1, S.A.

Telegraphic Address: "Carrfast," Adelaide

• INSTANTANEOUS • RATTLEPROOF
• ONE PART • NO TOOLS REQUIRED
• INSTALLED WHEN ONLY ONE SURFACE IS ACCESSIBLE • SAVES TIME IN ASSEMBLING OPERATION



DRILL OR PUNCH HOLE



INSERT FASTENER



SNAP IN TUBING



SNAP IN WIRING HARNESS



"Production Line"

Perfection



it lasts years longer
if the bodywork is . . .

Control

STEEL SHEET

C.R.M. DIVISION OF LYSAGHT'S WORKS PTY. LIMITED

JOHN LYSAGHT (AUSTRALIA) PTY. LIMITED — GENERAL SALES AGENTS. SYDNEY:
33 Macquarie Place. MELBOURNE: 70-84 Clarendon Street, South Melbourne. ADELAIDE:
13 Grenfell Street. BRISBANE: 307-311 Queen Street. FREMANTLE: Corner of Short and
Pakenham Streets. WELLINGTON, N.Z.: John Lysaght's Bristol Works Limited.



Spire Speed Nuts for threaded and non-threaded members. Their great features are speed and versatility, giving simplified assembly at very reduced cost. For use with sheet metal screws or machine screws. Available types include flat nuts, self retaining nuts for blind assembly, cable clips, knob to shaft clips, spring latches, etc.

The self-locking **Simmonds Nut** with its fibre collar replaces castle nut and split pin.

The **Pinnacle Nut** has a non-corrodible metal diaphragm and is more suitable where extremes of heat and humidity exist.

Spire Speed Nuts, Simmonds Nuts and Pinnacle Nuts successfully withstand the effects of vibration, expansion and contraction. All three have special purposes and are busily engaged in more industries than you might think possible. We welcome the chance to advise you which to use for your assembly problem.

SIMMONDS AEROCESSORIES (PTY) LTD.

357, EXHIBITION STREET · MELBOURNE · C.I.

BOHLER ☆ STEELS

FOR ALL AUSTRALIAN INDUSTRIES

FOR TOOL MAKERS OF QUALITY PRODUCTS

Bohler "CC"	} — Bohler High Speed Steels.
Bohler "Super Rapid Extra 300"	
Bohler "Super Rapid Extra MO"	
Bohler "Amufit"	} — Non-shrink Die Steels.
Bohler "Extra MG"	
Bohler "MST"	
Bohler "Special K"	— High Carbon High Chrome Die Steel.
Bohler "MY Extra"	— Shock-resisting for Snaps, Punches, etc.
Bohler "KL"	— Shock-resisting for punches, shear blades, etc.
Bohler "WKZ"	— Hot Die Steel for Ajax Bolt Heading Machinery, Die Casting, etc.
Bohler "GNM"	— Heat-treated ready for Drop Forging, Dies, etc.
Bohler "V6N"	— For Cold Heading Dies.
Bohler "SSC" (Silver Steel)	— Bohler Carbon Steels, etc.
Bohler "KMC"	— Medium Carbon Low Chromium General Purpose Steel.

FOR THE PLASTICS INDUSTRY

Bohler "EBK"	— The hobbing steel par excellence. Perfect flow; shining, smooth replica of the "Master Hob."
Bohler "NBS"	— For Master Hob.
Bohler "NBSN"	— Heat-treated Die Blocks (no further heat treatment necessary).
Bohler "WKWI"	— Corrosion-resisting Steel for Hobbing, and many other grades.

FOR THE MINING INDUSTRY

Bohler Alloy Drill Steel, solid and hollow.	
Bohler "M751" and Bohler "M851"	— Hollow Drill Steel.
Bohler "Brownie"	— Solid Drill Steel.
Bohler Chronos, Pins, Bushes, Tool Joints, Elevator Shackles, Drop Forgings from half a lb. to about 4 cwt.	

Immediate attention to enquiries from any part of the Commonwealth

**BOHLER "ACE" SPECIAL STEEL FOR NITRIDING
AND MANY OTHER GRADES**

**STAINLESS AND HEAT-RESISTING STEELS
IN SHEETS AND BARS**

BOHLER PNEUMATIC TOOLS

**BOHLER HIGH-GRADE WELDING WIRES
AND ELECTRODES**

Sole Distributor for N.S.W.

Wm. BARRON & SON PTY. LIMITED

20-24 WYNDHAM STREET, ALEXANDRIA, N.S.W. Phones : MX 3436, MX 3437

(Wm. N. Barron, Sole Australian Agent for Gebr. Bohler & Co., Vienna)

Agents in other States to be appointed

The RUBBER INDUSTRIES

— and —
their
REQUIREMENTS

The requirements of the rubber industries become more exacting and greater in tonnage as those industries continue to expand in all directions.

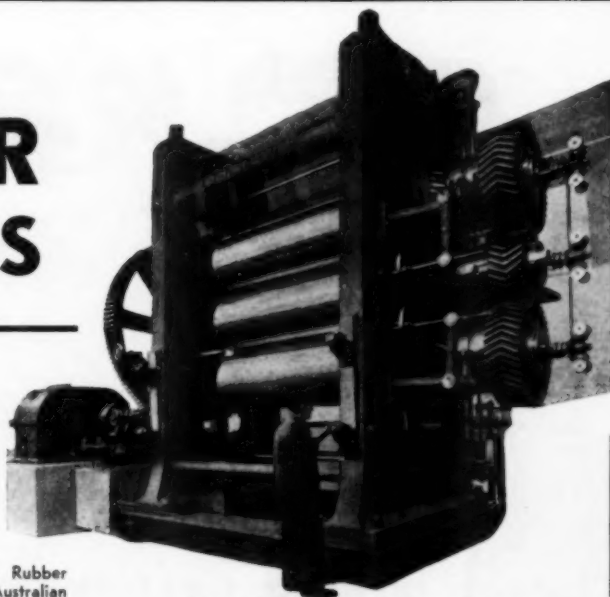
"CORBETT'S" has always been well known for Rubber Chemicals (and all other chemicals), and, as the Australian agents for The Rubber Regenerating Co. Ltd., England, "CORBETT'S" is also in a very sound position to offer practically any other raw materials used in rubber fabrication. Technical information is freely available, and, generally, "CORBETT'S" services to the rubber trades are well worth closer investigation.

RUBBER DISPERSIONS:

RECLAIMED RUBBER:

RUBBER CHEMICALS:

RUBBER LABELS:



**SMOKED SHEET
CREPE RUBBER
LATEX GRADES**

Aqueous dispersions of rubber are becoming increasingly popular in many trades, where they are excellent and economical substitutes for Latex in certain applications.

An economical substitute for fresh raw sheet, Reclaimed Rubber is finding wider application in manufacture of certain articles where the properties of fresh are not strictly required.

As Australian agents for The Naugatuck Chemical Division of The U.S. Rubber Co., we are pleased to announce that this range of Accelerators, Antioxidants, etc., will shortly be available from the British factory.

Brilliantly coloured labels to your own design. These are in semi-cured rubber and are completely cured into the finished article. The finishing touch for Tyres, Retreads, Footwear, Hot Water Bottles and all rubber articles.

— *Robert Corbett Pty. Ltd.* —

**"Corsol House," 274-6 Kent Street, Sydney, N.S.W.
and throughout Australasia**



We Specialise.

In Units and Systems for
AIR CONDITIONING
HEATING & VENTILATING
INDUSTRIAL DRYING
PNEUMATIC CONVEYING
DUST & FUME EXHAUSTING
FANS FOR ALL PURPOSES



Truflow PAINT SPRAY BOOTH



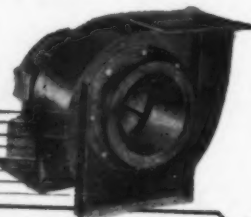
Truflow
AXIAL FLOW FAN



Truflow
UNIT HEATER

We offer you reliable service and early deliveries

AIR **CONTROL**



AIR CONTROL EQUIPMENT PTY. LTD.
DUNNING AVENUE • WATERLOO • N.S.W. Phone MU 1211
A Unit of Electricity Motor and Allied Industries Ltd.

EYELETS



tremendous trifles in metal

*Leaders in mass production of meticulously accurate
small metal stampings.*

EYELETS PROPRIETARY LTD.
WINDSOR, VICTORIA

Interstate Agents: Sydney —
C. H. R. Johnston Pty. Ltd.
Brisbane — Eric D. Welsh.



Adelaide — F. L. Rungie &
Sons. Perth — C. R. Palmer
Pty. Ltd. Auckland — Carrel
& Carrel.

Meehanite metal castings

FOR ACCURACY... AND PRECISION

Controlled metal structure and freedom from objectionable internal stresses contribute to maintain accuracy in each casting. High tensile and transverse strengths, a true modulus of elasticity, anti-friction qualities and high vibration damping qualities mean reliability in service and assure positive translation of superior design characteristics into the finished product.

For your casting problems consult the nearest
"MEEHANITE" FOUNDRY

A.C.I. Engineering Pty. Ltd.,
Waterloo, N.S.W.
David Duncan, South Mel-
bourne, VIC.

Enterprise Foundry &
Machine Co. Pty. Ltd.,
Sefton, N.S.W.

A. Goninan & Co. Ltd.,
Broadmeadow, N.S.W.

Grimwade Castings Pty. Ltd.,
Port Melbourne, VIC.

Hoskins Engineering &
Foundry Pty. Ltd., Perth,
W.A.

Jeffress Foundries Pty. Ltd.,
Northgate, Q.

Kalgoorlie Engineering &
Foundry Pty. Ltd., Kal-
goorlie, W.A.

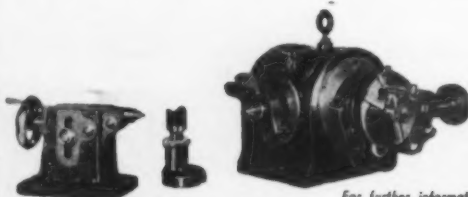
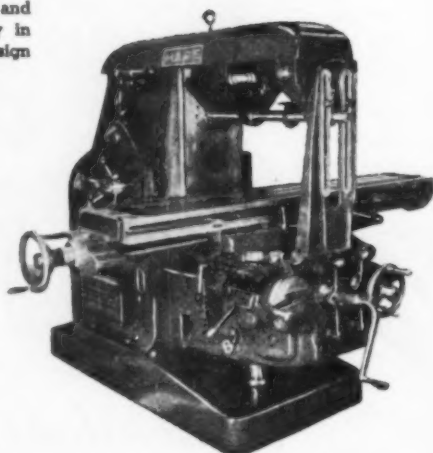
Kelvinator Australia Ltd.,
Adelaide, S.A.

Malleable Castings Ltd.,
Marrickville, N.S.W.

Mars Machine Tool Mfg. Co.
Pty. Ltd., Brisbane, Q.

Perry Engineering Co. Ltd.,
Adelaide, S.A.

Russell Allport & Co. Pty.
Ltd., Hobart, TAS.



THE MAJOR CASTINGS IN THE
MACHINE TOOLS SHOWN IN THE
ILLUSTRATIONS ARE "MEEHANITE"
METAL.

For further information write to any of the above or to

MEEHANITE RESEARCH INSTITUTE OF AUSTRALASIA

P. O. Box 1, Waterloo, N. S. W.

M12 58

... fine electrical equipment for
40 years

- Iron Clad Service Fuses, Porcelain Fuses, Cartridge Fuses, Plastic Moulded Fuses, Iron Clad Switchgear, Knife Switches, Switchfuse Plugs, Switch Plugs, Distribution Boards.
- Float Switches, Limit Switches, Relays, Contactors, D.O.L. Starters, Push Button Stations, Rotary Changeover Switches, Plugs and Receptacles.
- Trolley Wire Suspension Fittings, Controllers, Resistance Grids, Solenoid Brakes, Automatic Haulage and Crane Control Equipment, Cable Couplers.
- Also Davy Flame-proof Mining Equipment and Boring Machines.

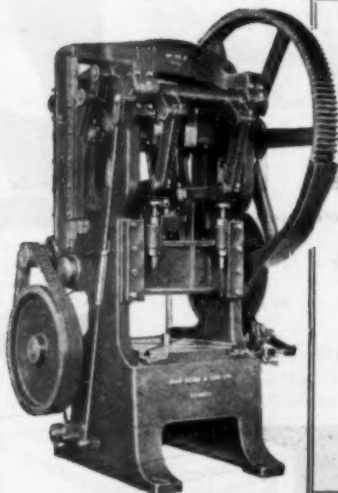


Electric Control & Engineering Limited

HEAD OFFICE: MANUFACTURING ELECTRICAL ENGINEERS
CHESTER STREET, CAMPERDOWN, SYDNEY, N.S.W. • PHONE LA3211, 4 LINES

EE 586

AND AT MELBOURNE • BRISBANE • ADELAIDE • PERTH • NEWCASTLE



95A Series 2 Double Action
Drawing Press

Representatives:

McPHERSONS LTD.	• • • • •	Melbourne, Adelaide, Perth
E.S.C.A. LTD.	• • • • •	Brisbane
JOHN CHAMBERS & SONS LTD.	• • • • •	New Zealand

JOHN HEINE & SON PTY. LTD.

Established 1886

Telephones: LM 1444

ALLEN STREET, LEICHHARDT, N.S.W.

Telegraphic Address: HEINESON, SYDNEY

MANUFACTURERS OF ALL TYPES OF MECHANICAL
PRESSES, SHEET METAL WORKING MACHINERY,
CAN MAKING MACHINERY & PRECISION DIE SETS

CONSULT OUR TECHNICAL DEPARTMENTS REGARDING YOUR
REQUIREMENTS

83 YEARS OF
EXPERIENCE TO HELP YOU



172A Series 1 All-Steel Bending
Press with Air-operated Clutch.

J.H.A.4



Whenever You Need RIVETS think of F.G.S.

The F.G.S. rivet-making plant is one of the largest and most up-to-date in the Commonwealth. The plant capacity in a day shift is a million rivets, a million screws, and half a million nuts.

This enormous output has been built up on accuracy, versatility, and service.

Accuracy, to fit exactly every time; the right hardness and toughness of metal to give uniform, clean turnover.

Versatility to manufacture an enormous range of bifurcated, solid, tubular, and semi-tubular rivets in steel and non-ferrous metals as well as a tremendous variety of parts by the cold-heading process (such as stepped rivets, cup hooks, swivel pins, knobs, toilet bolts, etc.).

Service to meet the production needs of manufacturers of all kinds.

If you need rivets in any line you manufacture, it will pay you to consult F.G.S.

F.G.S. PRODUCTS PTY. LTD.

Euston Road and Maddox Street, Alexandria, N.S.W. Telephone: LA 5074.

INTERSTATE AND NEW ZEALAND AGENTS:

A. H. HILLS
Orient Line Bldg
113 Eagle Street
Brisbane, Qld.

W. BENNETT
433 Spencer Street
West Melbourne, Vic.

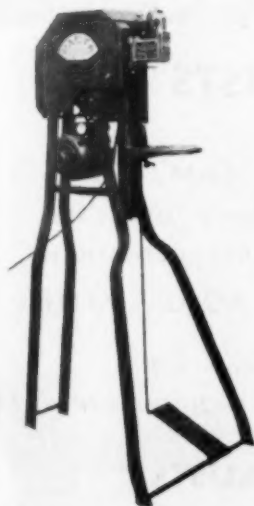
R. C. WOOLLARD
18 Chesser Street
Adelaide, S.A.

T. W. EGAN
75 King Street
Perth, W.A.

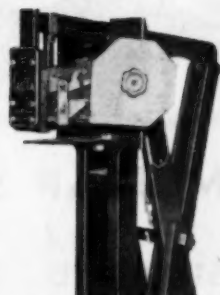
V. MacDONALD BRAME & CO.
57 Collins Street
Hobart, Tas.

J. L. GARRARD & SON LTD.
Customhouse Quay
Wellington, N.Z.

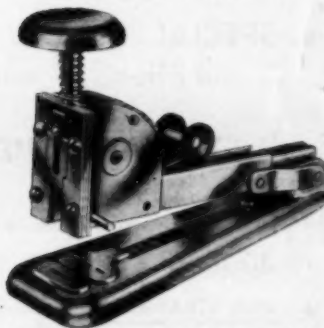
HAND - TREADLE - ELECTRIC STAPLING MACHINES



The electric model shown here will drive staples at the slightest touch of the operator on the foot pedal and thus eliminate "Operator Fatigue." The electric models have adjustable speeds, giving the machines a wide range of operation.



Close-up of the "Pacta" head, showing the staple magazine and cutter. The magazine on the hand- and treadle-operated models will hold sufficient steel for 10,000 staples, while the electric model will cut as many as 30,000 from a load.



We are pleased to show our clients the latest design of the Vanguard 4a stapling machine. The 4a model is one of the most efficient desk-type staplers and is readily available.



The treadle-operated "PACTA" is one of the most economical machines suitable for a variety of uses and eliminates the continuous refilling of staples as with the smaller office type stapling machines.

The above shown machines are only a few of our wide range of stapling machines. We invite you to let us have your enquiry and we will let you have full particulars on machines available.

MELB.: 100 Bay Street, Port Melbourne, Vic.
(MX 6043)

BRIS.: 121 Eagle Street, Brisbane, Qld.
(B 3327)

NEWCASTLE: Organisation Pty. Ltd., King & Perkin Streets, Newcastle.
(B 1637)



Westons
PROPS. WESTON'S PTY. LIMITED



WESTON HOUSE, MACQUARIE PLACE, SYDNEY
TELEPHONES - BU 3346-7-8 and BU 3761

ADEL.: 93 Flinders Street, Adelaide, S.A.
(Cent. 5527)

PERTH: 18 William Street, Perth, W.A.
(B 6693)

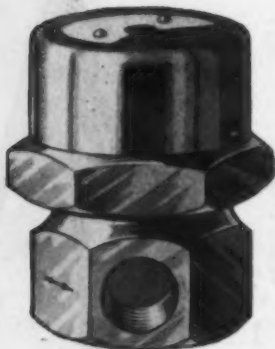
CAIRNS: P. L. & G. Potter, 91 Grafton Street, Cairns.
(Cairns 3188)

TOROID

HIS ORGANISATION REALLY OFFERS INDUSTRIAL DEVELOPMENT

INDUSTRIAL SUPPLIES PTY. LTD.

"THE STEAM TRAP SPECIALISTS"



Patent No. 118196
World Patents.

- ★ STANDARD "TOROID" STEAM TRAPS give the highest efficiency over the widest range of operating conditions 2lb-250lb WITHOUT ADJUSTMENT

- ★ SPECIAL STEAM TRAPS can be supplied to meet any requirements

"WE ARE THE SPECIALISTS!"

*Consult us on your steam trapping problems,
without obligation.*

We also supply—

- ★ LINE STRAINERS (to prevent scale and dirt from entering your traps).
- ★ SIGHT GLASSES (to provide visual detection of faulty traps).
- ★ BY-PASSES (to cope with abnormally heavy initial condensate loads).
- ★ STEAM VALVES (Patented "Toroid").
- ★ CHECK VALVES.



REPLACEMENT
SETS

Literature and other particulars on request from

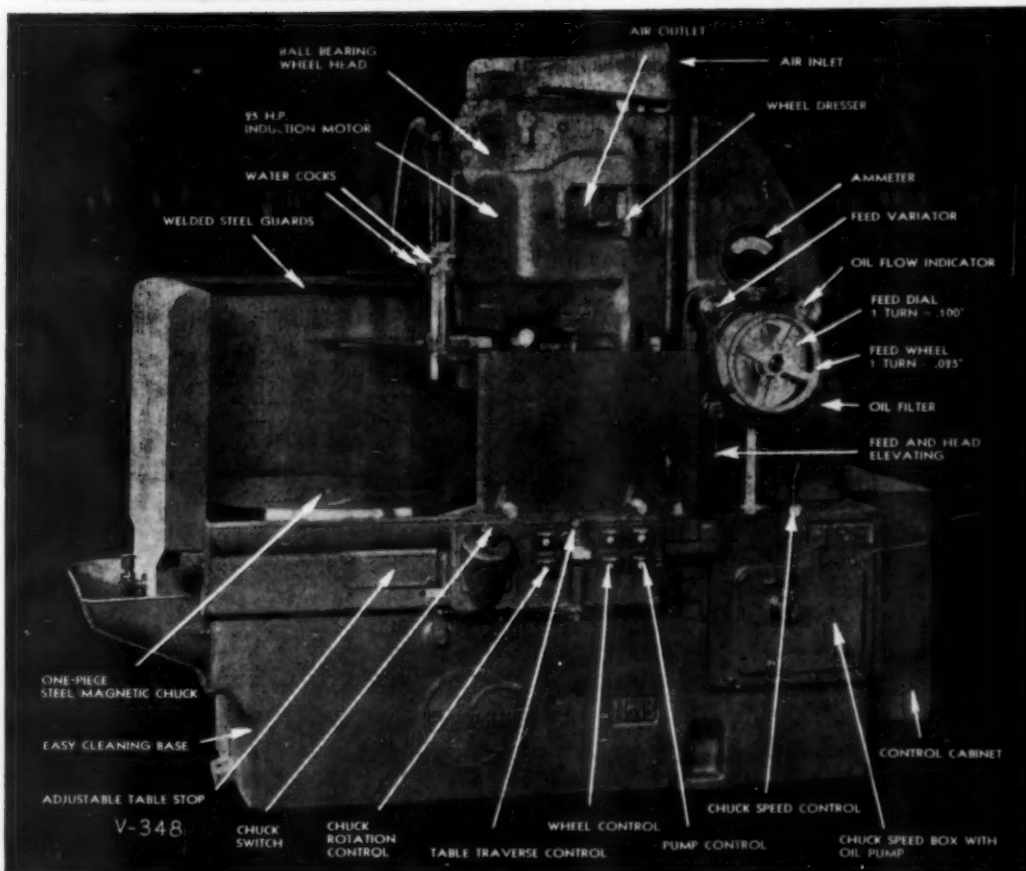
TOROID INDUSTRIAL SUPPLIES Pty. Ltd.

528-530 Collins Street, Melbourne, Australia.

Sydney: 557 Elizabeth Street.

And LEADING MERCHANTS in all other States.





**FOR MACHINING ANY FLAT SURFACE REQUIRING
HIGH FINISH AND ACCURACY WITHIN CLOSE LIMITS**

BLANCHARD SURFACE GRINDERS

Manufactured by
THE BLANCHARD MACHINE CO., U.S.A.

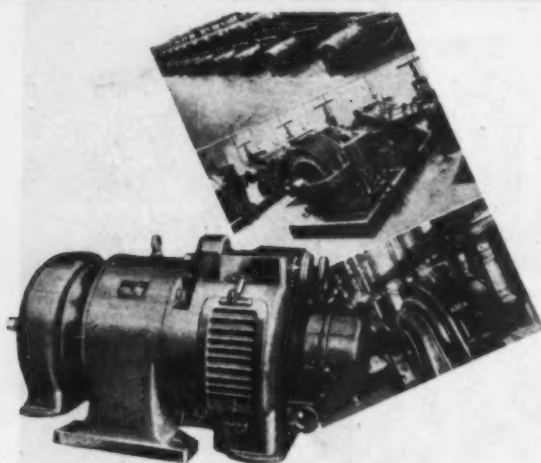
Work outside the field of ordinary surface grinding comes well within the scope of Blanchard Grinding. It is accurate, both as to size and flatness. The surface is finely finished, and the speed of the Blanchard method gives a high daily output. Ease of operation is another Blanchard advantage. Push buttons control the individual motors for the various motions. Except for handling the work in and out, the process is completely mechanised. We illustrate the operator's side of a Blanchard No. 18 Grinder, with guards open, chuck in loading position and head near the upper end of its travel. Note the close, convenient, grouping of controls. Quotations and technical particulars on request.

Distributors:

GIBSON BATTLE & COMPANY LTD.

535 Kent St., Sydney, Tel.: M6661 and "Hunter House", 262 Hunter St., Newcastle West (P.O. Box 250, Newcastle)

VICTORIA: Gibson, Battle (Melb.) Ltd., 84 William Street, Melbourne. QUEENSLAND: Underhill, Day & Co. Pty. Ltd., T. & G. Building, Brisbane. SOUTH AUST.: Parsons & Robertson Ltd., 172 Pulteney Street, Adelaide. WEST AUSTRALIA: Flower, Davies & Johnson Ltd., 413 Murray Street, Perth.



ASEA

Variable Speed Three-Phase COMMUTATOR MOTORS

The ASEA commutator motor is now available for delivery from stock

FEATURES:

SPEED REGULATION: This is performed practically without losses, is independent of the load, and has an infinitely variable speed ratio from minimum to maximum speed.
SPEED RANGE: Standard machines have a 4 to 1 speed range. Wider speed ranges can be supplied on request.
STARTING: ASEA Commutator Motors have excellent starting characteristics.
CONTROL: Speed control can be manual or remote automatic.

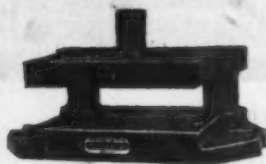
Australian Distributors:

R. & C. THOMAS BROS. PTY. LTD.
410 Lonsdale St., Melbourne, Vic.
ASEA ELECTRIC (AUST.) PTY. LTD.
10 O'Connell St., Sydney, N.S.W.

R. P. McINERNEY & CO. LTD., 441-445 Murray St., Perth, W.A.

INTERCOLONIAL BORING CO. LTD.
450-460 Ann St., Brisbane, Qld.
UNBEHAUN & JOHNSTONE LTD.
58 Gawler Place, Adelaide, S.A.

JOHN HEINE



PRECISION DIE SETS FOR PRESS TOOLS Immediate Delivery

Standardized Units
ensure speedy and
accurate delivery.

Write for illustrated Bulletin 492

JOHN HEINE & SON PTY. LTD.

ALLEN STREET, LEICHHARDT, SYDNEY, N.S.W.

Melbourne, Adelaide and Perth: McPherson's Ltd.

Brisbane: Engineering Supply Co. of Aust. Ltd.

New Zealand: John Chambers & Son Ltd.

FIRST IN THE FIELD



The Andries organisation pioneered the craft of Diamond Cutting in Australia and were the first to undertake the manufacture of Industrial Diamond Tools in this country.



If you require Diamonds or Diamond Tools for any application, consult —

E. ANDRIES & SONS PTY. LIMITED

245 PITT STREET, SYDNEY, N.S.W.

MA 3995.

19A BANK STREET, SOUTH MELBOURNE, VIC.

MX 4165.



ELECTRIC EQUIPMENT FOR INDUSTRY

In industries throughout Australia electrical equipment is to be found bearing the nameplate of Australian General Electric Pty. Ltd. Behind the familiar "A.G.E." monogram stand the unrivalled manufacturing resources of Australian General Electric, backed by affiliation with the world's leading electrical organisations and continued research and development over 40 years.

At the A.G.E. factories at Auburn and Villawood (N.S.W.), Richmond (Vic.), and Redbank (Qld.), highly trained engineers, designers and skilled tradesmen, working with the most modern equipment, produce a range of electrical products and household appliances that uphold the tradition of A.G.E. quality.

AUSTRALIAN GENERAL ELECTRIC

Sydney, Newcastle, Lismore, Melbourne,
Brisbane, Rockhampton, Townsville, Adelaide,
Hobart, Launceston.

Agent in W.A.: Atkins (W.A.) Ltd.



OVER 100 WAYS TO CUT COSTS!

IN PRODUCTION • REPAIR • MAINTENANCE • CONSTRUCTION

Replace slow handwork and obsolete tools with modern, speedy Black and Decker Electric Tools. They cut deeply into your cost problem, achieving faster, better performance per man, per hour, per tool. Black and Decker produce the world's most comprehensive tool line, each one engineered for to-day's exacting demands. Black and Decker offers you precisely the right tool for every job in your business!

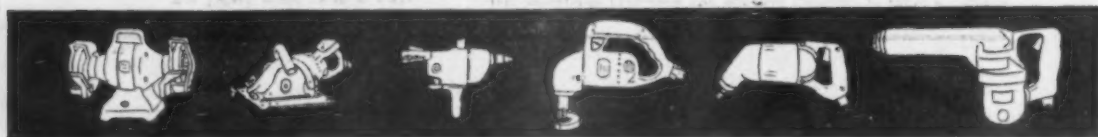
Ask your nearest distributor for expert help in cutting costs.

WHENEVER AND WHEREVER PORTABLE ELECTRIC TOOLS ARE REQUIRED, SPECIFY

Black & Decker
PORTABLE ELECTRIC TOOLS

Distributors:

NEW SOUTH WALES: Bennett & Wood Pty. Ltd.; McPherson's Limited; Warburton, Franki Limited. NEWCASTLE: Bennett & Wood Pty. Ltd.; Warburton, Franki Limited. QUEENSLAND: Martin Wilson Bros. Pty. Ltd. VICTORIA: E. A. Machin & Co. Ltd.; McPherson's Limited; Warburton, Franki Limited. SOUTH AUSTRALIA: Parson's & Robertson Ltd.; McPherson's Limited. WESTERN AUSTRALIA: William Adams & Co. Ltd. TASMANIA: W. & G. Genders Pty. Ltd.



The Australasian MANUFACTURER

Established 1916

35th Year of Service to Industry

Telephones: Sydney, BU 3493, BU 3494.
Melbourne, FJ 3256.

Postal Address: Box 1687, G.P.O., Sydney, and
Box 4525, G.P.O., Melbourne.

■ Australia's National Manufacturers' Newspaper circulating in all States, New Zealand and Overseas. A weekly newspaper devoted to industrial efficiency and the manufacturing progress of Australia. Subscriptions within Australia and New Zealand (including Annual Number), £1/10/-; Great Britain and Possessions, £2; Foreign, £2/10/-. All subscriptions payable in advance. Microfilm subscription by arrangement.

PAGE NINETEEN

NOVEMBER 25, 1950.



Australia's Rapidly Rising Wage Rates Serious Threat to Local Enterprise

"While part of the increase in prices is directly or indirectly attributable to higher prices for imports and exportable products, most of it appears to have been due to the continued pressure of internal demand on domestic production operating largely through increased pressure for, and willingness to grant, wage increases. This pressure was aggravated by the high level of rural incomes, the pressure of investment spending, and the inflow of capital."—Extract from the Annual Report of the Commonwealth Bank, dated June, 1950.

THAT finding, emanating from so high a source, leaves little ground for doubting that the ever-rising wage spiral is a basic contributing factor to high prices, and high production costs, which menace the very foundations of the Australian Industrial Structure.

Small wonder, therefore, that the £1 per week increase in the basic wage recently granted by the Commonwealth Arbitration Court and operating from the first pay period in December, is causing the manufacturers of this nation grave concern. For the importers are hammering dangerously at our gates. And the addition of £1 per week to wages already higher than those of workers in the United Kingdom, whence flows the greatest stream of imports, may well be said to constitute a serious threat to the survival of many young manufacturing undertakings which, in their initial stages, are being called upon to carry burdens capable of being sustained only by those of wide experience and long establishment.

The difficulties confronting the manufacturers of Australia can, perhaps, best be appreciated by comparing Australian and United Kingdom wage rates and hours of work in the metal trades—conditions in this group, unquestionably the most important, being typical of those obtaining throughout manufacturing industries generally.

Here, for example, are comparative figures of rates of pay and hours of work for skilled metal tradesmen:

Australia.

Wage of skilled metal tradesmen 1939—£5/16/- per week of 44 hours.
Wage of skilled metal tradesmen
(including £1 basic wage increase) 1950—£10/12/- per week of 40 hours.

United Kingdom.

Wage of skilled metal tradesmen 1939—£3/7/- per week of 47 hours.
Wage of skilled metal tradesmen 1950—£5/11/- per week of 44 hours.

A like disparity exists between the wages of Australian and British metal trades labourers:

Australia.

Wage of metal trades labourer .. 1939—£4/-/- per week of 44 hours.
Wage of metal trades labourer
(including £1 basic wage increase) 1950—£8/-/- per week of 40 hours.

United Kingdom.

Wage of metal trades labourers 1939—£2/12/6 per week of 47 hours.
Wage of metal trades labourers 1950—£4/17/- per week of 44 hours.

These figures show the spectacular rises which have occurred in Australian rates of pay in the "heavy" industries between the pre-war period and the present year.

Equally illuminating are the figures relating to the rises which have taken place in Australia since wage-pegging was lifted in 1946:

Australia.

Wage of metal trades skilled tradesmen 1946—£7/2/- per week of 44 hours.
Wage of metal trades skilled tradesmen (including £1 basic wage increase) 1950—£10/12/- per week of 40 hours.

United Kingdom.

Wage of metal trades skilled tradesmen 1946—£5/3/- per week of 47 hours.
Wage of metal trades skilled tradesmen 1950—£5/11/- per week of 44 hours.

In the four-year period, 1946-1950, moreover, there have also been marked differences between the rise in wages of Australian and British metal trades labourers. Here are the figures:

Australia.

Wage of metal trades labourers .. 1946—£5/6/- per week of 44 hours.
Wage of metal trades labourers
(including £1 basic wage increase) 1950—£8/-/- per week of 40 hours.

THE AUSTRALASIAN MANUFACTURER

[Page 20, November 25, 1950.]

United Kingdom.

Wage of metal trades labourers 1946—£4/10/- per week of 47 hours.
Wage of metal trades labourers 1950—£4/17/- per week of 44 hours.

The point at issue is: In face of facts and figures such as these, how can Australian production costs be kept at levels which will enable Australian manufacturers to stand four-square against fierce overseas competition?

The severity of this competition may be gauged from the fact that whereas in 1938/39, total imports were valued at £116 millions, by 1949/50 this figure had soared to £537 millions, with the threat of an even more staggering increase in 1950/51. It must be remembered, too, that 52 per cent. of Australian purchases from abroad derive from Britain, imports from which country are five times as great as those from any other single country. The serious threat to the Australian economy inherent in the widely differing Australian and British wage rates is only too obvious to require stressing.

The whole rising-wages position was summarised admirably by the Federal Conciliation Commissioner, Mr. J. Galvin, when he declared recently: "There is no economic system, capitalist, socialist or any other, that can stand the strain of pound after pound a week increase."

How is this increased wages bill to be met?

Whence will be secured the funds with which to pay the added burdens?

The funds will be secured from one source and from one source only—increased productivity per man-hour. For every pound paid in wages ultimately must come out of production. This is as true of free enterprise as it is of socialist and communistic economies. Only that which is produced can be distributed. And only in proportion as the Australian worker raises his individual output to levels comparable to those attained by his counterparts in the competing nations overseas, can manufacturing enterprise flourish in this Commonwealth and, in its flourishing, continue to provide for its workers living standards comparable with the highest and the best the modern world has to offer.

Pithy Jottings of Industry and Industrialists

CHALLENGE TO MANAGEMENT AND LABOUR.

In a particularly able address to the Institute of Industrial Management, Sir John Storey, chairman of the War Production Committee and of the Commonwealth



MR. RALPH L. BISHOP

who has been appointed secretary of Rubery, Owen & Kemsley Pty. Ltd., Finsbury, S.A. Mr. Bishop was formerly secretary of A. S. Horne Ltd., glove manufacturers, of Prospect, S.A.

Immigration Planning Council, expressed the opinion that if Australians are to maintain their present living standards, they must learn to work harder, longer, and more efficiently. "Our workmen and our management," he declared, "have an enormous amount to learn about a fair day's work and effective production management. Management must look towards the future years, accepting high wage levels and a short working week, and determine the steps it must take

to remain competitive. Obviously increased mechanisation, higher standards of efficiency of labour, of selection and training, and an over-all increase in management efficiency, through training, will be influential elements in our deliberations. . . . We are working fewer hours, paying higher wages, yet achieving lower production per man per year than the European and British manufacturers. Production in over-all industry compared with America (40-hour week) is less than one-half per man."

MINERS' SAFETY LAMPS IN W.A.

Mr. Richard L. Dimmitt, of W.A. will be taking over the Western Australian electrical busi-



MR. RICHARD L. DIMMITT,
W.A. representative for Nife miners' lamps.

ness of his father, Mr. Jas. A. Dimmitt, 81 St. George's Terrace, Perth, as from February next.

Since Mr. Dimmitt was demobilised from the A.I.F., he has been in Sydney completing his electrical engineering training and gaining a background in electrical engineering. He was for 2½ years with Godfreys Pty. Ltd., manufacturers of electrical switch equipment, and spent 2½ years as a consulting engineer.

Mr. R. L. Dimmitt (Dick Dimmitt) will also take over the W.A. representation of Nife miners' cap lamps. He is at present spending 3 months in the Nife servicing department in Sydney and will also spend sometime visiting the larger mines in the Eastern States. On his return to W.A. he will institute the Nife cap lamp service, which has proved so satisfactory and popular in the Eastern States. He will visit every mine in W.A. regularly and give advice on miners' safety cap lamps and associated equipment.

NEW FACTORY TO PRODUCE WATER PURIFICATION PLANTS.

Sulphates Ltd., Melbourne, is erecting a new factory for the manufacture of water purification plants. This is in addition to the proposed new chemical factory. The enterprise holds large bauxite deposits in Gippsland, Victoria, from which are produced the alumina, aluminium sulphates and other aluminium salts regularly supplied to the textile, paper, tanning and pharmaceutical industries.

RHEEMS AMALGAMATE WITH SIMPSONS, IN ADELAIDE.

Rheem (Australia) Pty. Ltd., in collaboration with A. Simpson and Sons Ltd., have formed a company in Adelaide for the manufacture of steel drums. The new enterprise, which has a nominal capital of £200,000, is to take over the small and light drum department of Simpsons.

POPE PRODUCTS BUY SYDNEY FACTORY.

Pope Products Ltd., of South Australia, has bought a factory in Mentmore Avenue, Rosebery, Sydney, for £20,000.

The property, which was damaged by fire recently, has a frontage of 160 feet to Mentmore Avenue and a depth of 124 feet. The vendors were Ormonoid Roofing and Asphalts Ltd.

A.G.E. STAFF CHANGE.

Australian General Electric Pty. Ltd. announce that Mr. L. T. Campey has relinquished the posi-



MR. L. T. CAMPEY.

tion of Merchandise Sales Manager for N.S.W. and assumed the duties of Assistant to the Director in Charge of Apparatus Sales—Mr. R. W. Campbell.

Mr. Campey's new duties will be predominantly associated with problems concerning motors and control equipment.

THE ADAPTABILITY OF ALUMINIUM IS UNLIMITED !



BUSBAR

ALUMINIUM BUSBAR WITHSTANDS THE WEATHER

Protection against the elements is built right into the sub-station shown here, Busbar and fittings all being of aluminium.

The density of aluminium being only one-third that of copper, for equal resistance an aluminium conductor will weigh only half as much.

For data on Aluminium Busbar and fittings contact AUSTRALUCO Sales Development Section.

5241D



AUSTRALIAN ALUMINIUM COMPANY PTY. LTD.

(Incorporated in the State of Victoria)

SALES OFFICES:

N.S.W.: P.O. Box 12, Granville. Phone UU3321

VIC.: 77 Bridge Road, Richmond. Phone JA 3951

Qld.: P.O. Box 725K GPO Brisbane. Phone B7483

S.A.: P.O. Box 943H, GPO Adelaide. Phone Cent. 7782

Our editorial representative in each State makes regular calls on manufacturers, but if YOU wish to see some particular phase of your business given publicity, communicate immediately with the Editor, and he will arrange for a representative to call.



Around & About the FACTORY



A digest of new factory and plant construction, additions, alterations and improvements, and operating news of Australian industry.

Visual X-Ray Inspection in the Food Industry

Foreign Inclusion is Efficiently Detected

Special X-ray equipments, developed by the Industrial X-ray Department of Philips in England, are now being used in an increasing number of industries for visual inspection of food and other consumer products.

In practice it has already been fully established, says Philips, that this equipment provides the most versatile and certain method

cently installed with Philips' X-ray equipment. During initial trials, pieces of glass no more than 1/16 in. diameter were detected in: 5 in. flour; 6 in. lard; 4 in. sugar, and 6 in. bread.

Philips' X-ray equipment is also being used for the examination of such varied commodities as frozen meat, bars of chocolates, sausages, Christ-



Philips' X-ray equipment described in the accompanying article.

of detecting foreign inclusions such as ferrous and non-ferrous metals, rubber, stones, glass, etc., many of which cannot be detected by any other system.

The efficiency of this method of examination is due to the fact that it is extremely sensitive to any change of density in the otherwise homogeneous mass under examination. For example, if a loaf of bread is being viewed, it presents a uniform image on the fluorescent screen of the equipment. If, however, a pin is embedded in the loaf the uniformity of the image is destroyed and the form of the pin is clearly seen as a black image due to the absorption of x-radiation through the plane in which the pin lies.

The ability of the X-ray method for detecting foreign bodies in food stuffs is illustrated by the results obtained from a bakery re-

mas puddings, packaged cereals, and a variety of pharmaceutical products. The efficiency of the system is illustrated by the fact that packets of biscuits may be inspected for minute inclusions of metal, glass or other foreign bodies, at the rate of 5,000 packets per hour.

The type of installation is naturally dependent upon the nature and shape of the commodity to be examined, the principal consideration being to project the largest area of the commodity on to the fluorescent screen.

In a typical installation, the product to be examined is conveyed through a dark booth, where it is observed by the inspector as it passes over the X-ray system. Should any impurities be revealed, the inspector, by means of a simple trigger mechanism, quickly rejects the contaminated product.

In this way the speed of the examination can be made to keep pace with the production rate.

The equipment is simple and safe to operate, and may be used with either conveyor or tray systems of inspection.

C.M.A. Head Returns from World Tour

Interesting Trade Developments Forecast

Among the passengers who returned to Australia on the Orca, on November 6th last was Mr. A. L. Blake, popular head of Cable Makers of Australia Pty. Ltd. He was accompanied by Mrs. Blake, and was met on arrival by Mr. M. Dillon, who has been occupying the position of Acting General Manager during Mr. Blake's absence abroad.

Interviewed on arrival, Mr. Blake said that he had visited most of the world's leading wire and cable manufacturers during his tour of England, Canada and America, and, as a result, felt convinced that the C.M.A. plant at Liverpool, N.S.W., still stood as one of the most up-to-date factories of its kind in existence.

"I also investigated very thoroughly the impact of television in both England and America," said Mr. Blake, "and there is no doubt that it will be an overnight success when it is introduced into Australia. I also brought back with me a considerable amount of technical data on the construction of the highly intricate cables required for TV, and my Company will commence work on a com-

plete range of the very latest types almost immediately."

Continuing, Mr. Blake paid a tribute to the remarkable strides made by Great Britain in its national recovery programme, and also to the almost unbelievable output of American factories, particularly those engaged on newly issued war contracts. "Even so," Mr. Blake went on to say, "I was appalled at the high cost of living, and feel convinced that the Australian worker is much better off financially than his counterpart on the other side of the world—without taking the recent basic wage increase into account!"

Mr. Blake also indicated that, as a result of his consultations with member companies of the well-known Cable Makers' Association of Great Britain, many important new developments would be undertaken by his Company in the very near future and which would be of great importance to the trade generally.

Mr. Blake looked particularly fit and well after his trip, but stated that he was "very glad to be 'back home' again on Australian soil."

Water Plays Big Part in Industry

Water in its natural state contains varying amounts of impurity and it is seldom any water supply remains constant over any lengthy period. Some waters vary in colour, some in turbidity—that is "suspended solids"—and in some dissolved solids (or mineral matter) many of which variations can cause differences in the effect of dyes and bleaching, beside alterations in the "handle" of fabrics.

The condition of water, then, plays an important part in industry, particularly those which use water to a great extent.

To the textile industry, water is of a major import. It is important to remove or considerably reduce, such impurities and produce a water of standard quality containing the minimum of deleterious ingredients and of sufficiently constant composition to ensure matching of colour and brilliance in colour in dyeing and satisfactory results in bleaching. Such standard water can be relied upon to give the same results on repetition. All raw—or natural—water can be suitably

TOTALLY ENCLOSED



Completely SEALED AGAINST TROUBLE

The windings and other vital parts of the Pope Electric Motor are totally enclosed - sealed against the entry of trouble-making dust, dirt, fluff, oil, steam and moisture. Dependable precision-built motors perfected by the world's leading designers, scientists and engineers, who have been assembled at Pope Products Limited to produce the first, low-priced range of totally enclosed electric motors made in Australia.

*Distributors Appointed In
All Capital Cities*

FULL PARTICULARS
ON APPLICATION TO

POPE PRODUCTS LIMITED

PERTH, ADELAIDE, MELBOURNE, SYDNEY AND BRISBANE

- GUARANTEED 12 MONTHS
- IMMEDIATE DELIVERY

Pope

$\frac{1}{2}$ H.P. TO 10 H.P. MODELS

**FAN-COOLED 3 PHASE SQUIRREL CAGE
ELECTRIC MOTORS**



EW-T-1

FIGURE NO
36

**JOHN BRONZE
PACKED GLAND COCK**

For Saturated STEAM
of 150 lbs. per sq. inch,
also for WATER and OIL
at 250 lbs. per sq. inch.



JOHN

M.B. JOHN LIMITED
BALLARAT - VICTORIA
AUSTRALIA

TRADE  MARK

MAKERS OF THE LARGEST RANGE OF
VALVES AND FITTINGS IN AUSTRALIA

ILLUSTRATED above is
one of the large range
of JOHN Valves and
Fittings for use with
STEAM, WATER, OIL,
CHEMICAL, AIR and
GAS Services of high,
medium or low pressures
and temperatures.

FULL PARTICULARS
supplied on request

treated to give the desirable results.

For wool scouring, bleaching, dyeing and other activities where a standard quality of water is of paramount importance, the standard is well-known. Much of this standard degree of water is secured by softening. Processes toward this end are either by chemical precipitation or what is termed base exchange. It has been shown that natural water is frequently unfit for many purposes for which it is required in the textile and other industries and should be closely scrutinised before being used.

Filtration and Water Softening Pty. Ltd., of 395 Collins Street, Melbourne, is a firm that specialises in the water treatment field and it makes a range of water treatment units. Its activities have covered an equally wide spread in local government, Government and industrial spheres. It has extended its work from small industries to huge reservoir works and swimming pools. Manufacturers interested in water treatment in their production units are invited to contact Filtration & Water Softening Pty. Ltd. for advice, which will be freely given by that organisation.

Bench Drills and Grinders

Recent Additions to Waldown Range

A recent addition to the Waldown family of bench drills and grinders is the C1 model. It is a neat and attractive job, and to the user it embodies a number of features that should command attention. It has a spindle speed

of about 8,000 revolutions a minute for external grinding and goes up to 25,000 revolutions a minute for internal work. It is powered with a 3 h.p. motor at 12,500 revolutions a minute. The grinding wheels are 5-in. x 1 1/2-in. x

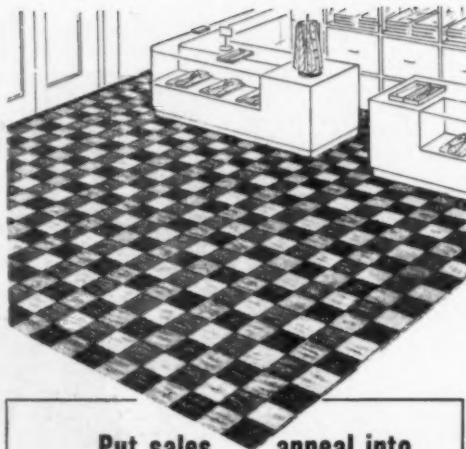
3 in. for external grinding and 1 1/2 in. x 1 in. x 1 in. for internal. It is fitted with an endless woven cotton belt and simple adjustment is obtainable by tilting the cradle. The motor has sealed ball bearings and the quills have pre-loaded magento type ball bearings. The switch is built into the motor. The quills are interchangeable and are supplied for both internal and external grinding. The motor and quill pulleys are interchangeable for obtaining the correct speed. To ensure dust free air for the motor, the air is drawn through a gauze filter. The unit weighs only 26 pounds and is supplied in an attractive case for carrying.

Another unit, that is fast making itself felt in various industries, is the utility radial bench drill with a half-inch capacity. It is described as a versatile drilling machine suitable for the tool room, the production workshop, the artisan and the hobbyist. It is a highly precision-built machine tool, embodying the design, finish and dependability that has always characterised the firm's

products. The unit possesses ability to be adjusted to numerous applications. Angle drilling from right to left is quickly and easily performed by the simple process of tilting the head and with the drill head swung in a horizontal position and a small grinding wheel mounted on an arbor, a grinding job, such as sharpening a drill, is quickly done.

It has the attribute of performing a polishing operation with the drill head swung in a horizontal position. By using a cup grinding wheel and head swung at the desired angle, a light surface grinding operation is possible. It is also capable of drilling a fuse board with the radial arm extended. It has a drilling speed of 4,000, 2,000, 1,000 and 500 r.p.m., and has a positive adjustable stop as well as a graduated rotary dial for depth drilling.

The two units described are manufactured by Waldown Pty. Ltd., of Bloomfield Street, Abbotsford, Victoria.



Put sales appeal into your shop floor

Your floor is your most important shop fitting. Install C.S.R. Floor Tiles and you impress customers instantly. 14 beautiful colors enable you to plan an individual color scheme... a pattern suitable to your shop interior. C.S.R. Floor Tiles are resilient. Easy

to clean. Basic colors go clear through the tile — retain their newness over long years of wear. For shops, offices, banks, factories, restaurants or homes — you'll be surprised at the low installation cost. Quickly laid by trained applicators on any good floor.

For the names of local installation distributors ring C.S.R., Building Materials Division in any capital city.



ASPHALT FLOOR TILES

Manufactured by Colonial Sugar Refining Co. Ltd.
Building Materials Division.

Solves Jacking Problems

New Vesta Triangle Safety Jack

Based on an American design, models of which have reached over one million in sales, the new Vesta triangle safety jack is manufactured in Australia by Vesta Products Pty. Ltd., a subsidiary of the Vesta Battery Company. Simplicity itself, the triangle jack consists of an inverted triangle of two tubular steel arms, hinged on a strong flat base-plate, and linked at the top by a steel chain. One of the steel arms has a crank at its tip, and turning this crank raises the car without effort. The car is raised at two points of suspension—the axle and the bumper bar, and the weight distribution at these two points is such that it is virtually impossible to overturn the jack or have the car slip off, even under the most severe conditions of test.

Designed essentially for cars with front and rear bumper bars, the Vesta triangle safety jack is not intended for trucks or vehicles without bumper bars, and although it will, of course, lift baby cars it is wise for owners of small cars to be sure that their bumpers are not too flimsy. The great advantages for the private owner are that this jack will lift his car on steep hills, in mud or ice, or on steep camber at the side of a road. It demands little effort on the user's part, and there is absolutely no need to squat down or lie on the road; and it is not necessary to get one's clothing soiled. For women motorists the jack must be a tremendous boon, putting them, as it does, on a plane of equality with any male motorist in the field of wheel-changing. The jack is tested to lift over half a ton, which is far more than the weight ever resting on one wheel of any fully loaded passenger car. Since the Vesta jack does so many things which ordinary jacks cannot do, and eliminates all risk and dirt from the task of jacking one's car, it should have just as great popularity in Australia and New Zealand as its prototype is having in the United States.

HOME-BUILDING REQUIREMENTS.

Nominally capitalised at £2,500,000, the enterprise of John McIlwrath Industries Ltd. is being formed with the object of taking over the business of John McIlwrath and Co. Pty. Ltd., Melbourne, suppliers of builders' and plumbers' requisites, etc. In addition to its merchandising operations, the company controls an up-to-date plant for the manufacture of plumbers' brassware; a rolling mill for processing sheet lead; and extrusion presses for the production of lead pipe and plumbers' fittings.

overhead



vertical



underwater



around corners



PHILIPS
C18 ELECTRODE

Contact

welds in all positions

NOTE THESE ADVANTAGES

- Cannot freeze.
- Three times faster than ordinary electrodes.
- Spot welds.
- Can be bent into any shape.
- Ignites automatically on contact with work.
- Requires little skill to operate.



Throughout the world this symbol guides the choice of millions.

PHILIPS C18
ELECTRODE

Available only from:

PHILIPS ELECTRICAL INDUSTRIES OF AUSTRALIA PTY. LTD.

Sydney • Melbourne • Brisbane • Adelaide • Perth

PTD-55

**Industrial Diamonds
GUTWIRTH & SONS
PTY. LTD.**

368 Collins Street, Melbourne
P.O. Box 980, G.P.O. Tel.: MU 5116

NONPORITE PTY.
LTD.
292-6 BURWOOD RD.,
HAWTHORN, E.2, VIC.

Telephones: Haw. 5801-2, 801



AGENTS
ALL
CAPITAL
CITIES
SEE
TELEPHONE
DIRECTORY



YOU WANT TO KNOW . . . and the editors will gladly tell you . . . more about the inventions, materials, and processes mentioned on this page. Write to Box 1687, G.P.O., SYDNEY, enclosing a stamped, self-addressed envelope.

Vertical Spline Hobbing Machine

There has recently been developed a hobbing machine which is capable of cutting spline shafts up to 33 in. long. Illustrated below, this machine will also handle spur and helical gears up to 15 in. dia.

Built up on the bed of the standard M.T.15 hobbing machine, this unit can be used for conventional and climb-hobbing opera-

The upright arm spans the full width of the bed, which houses the large capacity sump and the unit construction gearbox in the rear. The cradle is carried on ground slideways and the machine is designed to permit easy clearing of swarf.

Hob spindle and driving gears are incorporated in a swivel slide, which can be turned through 360 deg. Movement of the hob-slide is controlled by a precision-cut leadcrew, which is firmly mounted on the lower surface of the back hob slide and engages with a revolving nut in the gearbox.

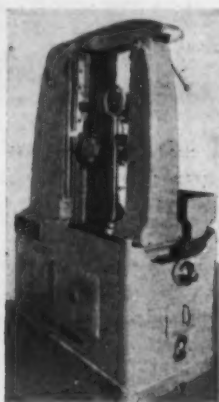
The dividing wormwheel is cut in position with the table, which is supported in the cradle by means of a large, flat annular seating. Axial location is provided by a tapered bearing. The worm is carried in an adjustable housing to permit backlash to be reduced to a minimum.

Traverse of the cradle is controlled by a nut and screw set in the slideway. Fine settings can be obtained by means of a micrometer dial.

All gears for the hob and table drives are housed in one gearbox. Speed, indexing and feed change gears are readily accessible. Automatic lubrication is provided by a plunger pump mounted in the sump, and coolant supplied to the hob by means of a centrifugal pump.

The automatic switchgear is controlled from a centralized push-button station on the operating side of the machine. Feed and rapid traverse motions are governed by adjustable stops. Safety limit stops are also provided. Rapid traverse of hob slide is effected by separate motor.

Overall dimensions of the machine are: length 68 in., width 49 in. and height 90 in. Maximum spline diameter hobbled, with four splines, is 11 in.; with six splines, 3 in.; eight splines, 31 in.; 10 splines, 41 in., and 12 or more splines, 5 in.



Spline shafts up to 33 in. long and spur and helical gears up to 15 in. dia. can be cut on this vertical spline hobbing machine. Conventional or climb-hobbing operations can be carried out without adjustment.

tions without adjustment. The hob slide is mounted on a heavy, rigid box section upright and travels on ground double rectangular guides. The cutting stay for supporting the work has an overarm brace attached to the upright, for added rigidity.

Maximum diameter of spur gear hobbled is 15 in., with pitches of 5 D.P. and 6 D.P. in cast iron and steel respectively. Net weight of machine is 6,270 lb. [2648].

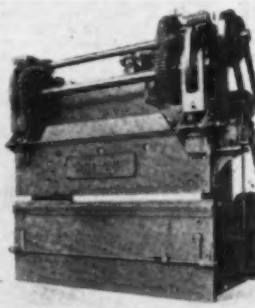
12-ft. Precision Press Brake

The accompanying illustration shows a double-crank precision bending press or press brake recently constructed, for bending mild steel plate up to 12 ft. long by 1/8 in. thick, or equivalent work. The pressure exerted at the bottom of the stroke is 200 tons, and the length of stroke is 4 in. In addition, to bending and folding, the machine can be used for multiple punching, notching, and shearing operations, and successive operations can be performed at one setting in a sequence of tools set up together in the press, on articles of suitable length. Vertically and horizontally adjustable location gauges can be used either at the front or rear of the press.

It is of all-steel construction, the bed, slide, and side members being steel slabs cut to shape and machined all over. The side members, which admit 10 ft. 6 in. between, are tied together by a strong fabricated steel girder. The press stands on a base of rolled steel beam sections, suitable for building into the concrete foundation.

Drive is by a 15-h.p. motor, mounted at the rear of the frame, through V-belts to a plate friction clutch, which actuates the slide, through double reduction gearing, at 30 strokes per minute. The crankshaft is continuous for the full length between the connecting rods, so as to give additional accuracy in the motion of the slide. The clutch can be controlled from any point along the press, and operates in conjunction with a powerful automatic brake. By these means the press slide may be inched round while performing the bending or other operation, an essential feature when bending large sheets.

The slide can be adjusted vertically through a distance of 5 in. by an independent 5-h.p. motor, thereby facilitating the setting of tools, and provision is made for ensuring the parallelism of the slide with the bed. Automatic pump lubrication is provided, the oil pump being driven by a small electric motor. When required, a



12-ft. Precision Press Brake.

central gap can be provided in the press bed to permit of closing and other honing operations.

The distance from the bed to the slide, with adjustment up and stroke half-way down, is 14 in., and the depth of the throat is 8 in. The overall height of the machine is 12 ft., and the distance from the floor to the bed is 2 ft. 8 in. The floor space required by the machine is 14 ft. 3 in. by 7 ft. 3 in., and the approximate weight, complete with motors, is 191 tons. [2647].

VICKERS DETROIT BALANCED HYDRAULIC (OIL) PUMPS

Small Series: Intermediate Series: Large Series.

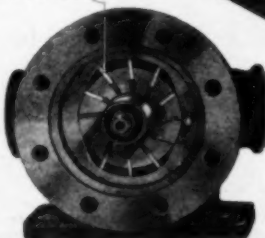
Rotary Vane Pumps

Capacities:—1 G.P.M. to 50 G.P.M. at any pressures up to 1,000 lbs. per sq. in.

The Compact, Reliable and Economical Pressure Source for

Oil Hydraulic Control Systems . . . Road Building and Maintenance Equipment . . . Truck and Bus Power Steering . . . Tractor and Construction Applications. Hydraulic Presses and Machine Tool Actuation.

Why Vickers balanced vane type rotary pumps are better pumps — because of the patented "Hydraulic Balance" construction and because of the simple alloy steel parts employed.



Vickers-Detroit Oil Hydraulic Pumps and Controls are manufactured in Australia by the sole licensee:—



Small series foot mounted single stage vane pump.

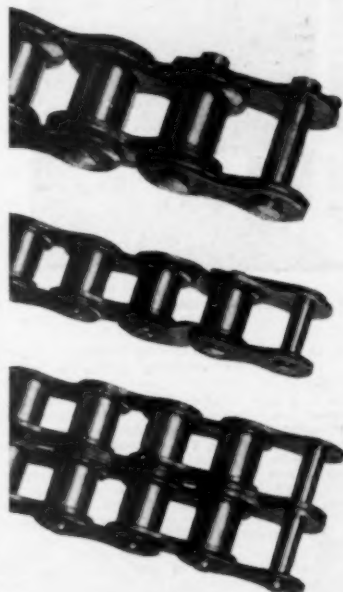


Intermediate series flange mounted single stage vane pump.

Distributors in New South Wales: C. S. Archer Pty. Ltd., Stanmore, Sydney, N.S.W.

**INDUSTRIAL SERVICE
ENGINEERS PTY. LTD.**

ASHLEY STREET, BRAYBROOK, VICTORIA, AUSTRALIA



INDUSTRIAL ROLLER CHAIN

MADE IN GERMANY

This industrial roller chain is produced to precision engineering standards in all required types and sizes. It is of robust construction and particularly recommended for efficient operation where heavy duty conditions are encountered and maximum strength is essential.

AVAILABLE FOR EARLY DELIVERY — INDENT ONLY

**SIMPLEX
DUPLEX
TRIPLEX**

Motor Cycle Chain Also Available

ROBERT A. CONAGHAN & COMPANY

239 Clarence Street, Sydney, N.S.W.

Telephone: BX 5825



CHEMICAL EXPOSITION

THIS WEEK WE HAVE WITHHELD OUR REGULAR

Swift Newsletter

to make way for an

Announcement Extraordinary!

THE CHEMICAL INDUSTRIES EXPOSITION

will be held at

Sydney Town Hall

8th - 19th December, 1950

under the auspices of

THE ROYAL AUSTRALIAN CHEMICAL INSTITUTE

and we look forward to
welcoming all our friends at

STAND No. 11 — UPPER HALL

where we will be pleased to discuss
matters of interest to all industrialists

SWIFT

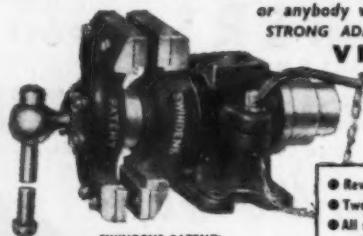
AND COMPANY LIMITED

26-30 CLARENCE ST., SYDNEY. BX1831

And at Melbourne, Brisbane, Adelaide and Perth. Also Wellington
and Auckland, New Zealand.

FOR ENGINEERS, MANUFACTURERS...

or anybody wanting a
STRONG ADAPTABLE
VICE



SWINDENS PATENT

REVOLVING HEAD VICE

Particulars, prices, etc.

- Revolving Head
- Two sets of jaws
- All steel construction
- Anvil top
- Range 2"-8"

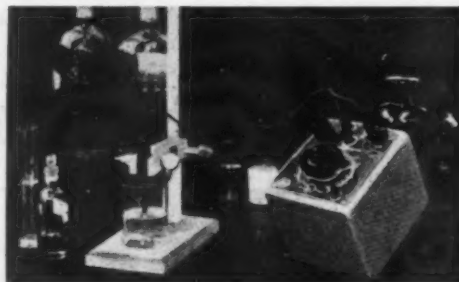
K. G. LUKE PTY. LTD. (Industrial Division)
391 Lt. Collins St., Melb. Tel. MU 1570

Conductance Bridge for Many Processes

Providing a very convenient and sensitive means for indicating chemical or concentration changes in a wide variety of industrial processes, a new conductance bridge has recently been introduced.

This instrument is basically a modified Wheatstone Bridge operating at a test frequency of 2.0 kc/s. The balance is obtained by means of a precision potentiometer and is indicated by a "magic eye" operated via an elec-

tronic amplifier embodied in the instrument. The instrument is self-contained in a metal case finished with corrosion-proof grey stoved enamel. The dimensions are: height 8½ in.; width 5½ in.; and length 7 in. The approximate weight is 8 lb. Operation is from A.C. mains 110-245 volts, 40-100 c/s and the power consumption is approximately 14 watts.



The new conductance bridge.

tronic amplifier embodied in the instrument.

A range switch gives multiplying factors of $\times 1$, $\times 100$ and $\times 10,000$. Two other positions are also included, one which enables readings to be taken directly in parts per million of sodium chloride, and the other which allows the bridge to be accurately calibrated by means of internal standards.

The instrument dial is calibrated in micro ohms. An inner scale is also provided, reading from 1 to 100 parts per million of sodium chloride. This scale is used in conjunction with a jacketed conductivity cell containing a

per million of sodium chloride, the accuracy given is ± 2 per cent.

The instrument is self-contained in a metal case finished with corrosion-proof grey stoved enamel. The dimensions are: height 8½ in.; width 5½ in.; and length 7 in. The approximate weight is 8 lb. Operation is from A.C. mains 110-245 volts, 40-100 c/s and the power consumption is approximately 14 watts.

The electrodes used consist of a pair of platinum plates rigidly mounted at the predetermined distance from each other and surrounded by a protective glass screen. [2644].

"Hall Effect" Gauss Meter

Electrical engineering has provided a superior method of measuring magnetic field strengths. Previous devices used, although excellent for the measuring of normal magnetic fields, have not possessed sufficient sensitivity for correct readings to be obtained in extremely small air gaps.

A new Gauss meter, capable of precise metering in confined spaces, has been developed. This instrument is said to be the first commercial equipment of its kind to employ the "Hall Effect", using the rare metal germanium. The "Hall Effect" is the production of a voltage across a strip of metal, or a semi-conductor, at right angles to the direction of applied current and magnetic fields. Of the numerous metals available, germanium was chosen because of its extreme hardness and good semi-conducting powers, which make it particularly suitable for the purpose.

The germanium "Hall" plate is sheathed in a probe fine enough for entry into the most restricted spaces and the readings obtained are recorded on a dial which forms part of a small compact control unit. Incorporated in this instrument is a battery, thus rendering the equipment independent of external power supplies.

The equipment is particularly suited for the measuring of instrument magnets and loud-speaker fields. Its other applications cover all branches of the electrical engineering industry, ranging from the indication and strength of stray magnetic fields, and polarity checking, to the measurement of flux density in the air gaps of all types of D.C. machines. [2616].

Harm-Proof Conveyor for Tins

Applied electro-magnetics have solved an industrial conveyance problem. An increasingly large number of finished products are marketed in attractively printed cylindrical metal containers. The goods' eye-appeal suffers if the enamelled surface is damaged at any stage between manufacturer and consumer. A frequent danger area is the journey from can-making machine to filling point.

Manual methods of transport are both costly in labour and liable to damage the tins; mechanical conveyor belts, though ultimately cheaper, provide perhaps even less safety. What is really required is an automatic transport system, with no risk of bumps.

A solution to the problem has been devised, of which the underlying idea is extremely simple: electro-magnetic energy is used both to hold the tins in place by attracting the steel in them, and to impel them uniformly forward.



OUTSIDE
CONSTRUCTIONS

... ONE SECTION OF *Goodwin* ACTIVITIES
WHICH INCLUDE:

- ★ FORGING
- ★ MACHINING
- ★ SHIPBUILDING
- ★ AUTOMATIC WELDING
- ★ SHEET METAL WORK
- ★ WONDERHEAT FIRES
- ★ GENERAL ENGINEERING
- ★ RAILWAY ROLLING STOCK

The above illustration shows bulk storage tanks of 1,200,000 gallon capacity each at the new Bitumen Refinery of the Shell Company of Australia Ltd. at Clyde, N.S.W., being site welded for speed and ease of erection—a division of our specialised outside construction facilities, which, apart from heavy plant and tank work, includes structural steel fabrication and erection.

We are fully equipped with the design staff, fabricating shops, outside erecting teams, and gear, including mobile cranes for the construction of bulk tanks, structural work and heavy plate work.

When it's bulk tanks for oil storage, water supply, etc., factory extensions or processing plant—"give the plans to Goodwin."

★ We shall be pleased to quote to your drawings and specifications.

A. E. GOODWIN LIMITED
Engineers

TELEPHONE MW 2394 (3 LINES)
Head Office: 47 Forsyth St., Blackwattle Bay,
N.S.W.
AND AT ST. MARYS AND PORT KEMBLA



8 ACRES OF PLANT AND TECHNICAL RESOURCES

"Give Us the Tools and We Will Finish the Job"



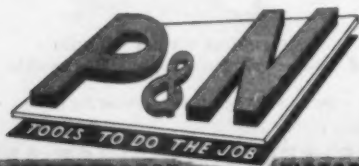
P & N HAND TAPS ON ANY JOB

will "clean" up the work . . .

It takes altogether twenty controlled operations to manufacture every P. & N. Hand Tap—and the result is a tap, made to *British Standard Grade I Specifications, No. 949, that is the equal of any in the world in material, in heat treatment, in work accuracy of thread, form and size. On the job, this means clean, accurate threads, longer tap life and fewer replacements.

*EXAMPLES: Total tolerance allowable on effective diameter between maximum-minimum size is .0012in. for $\frac{1}{4}$ in. Whit. Hand Tap; is .0017in. for $\frac{5}{16}$ in. and .0019in. for $\frac{7}{16}$ in. Whit. Hand Taps.

**From all Leading
Hardware Houses
throughout Australia**



PATIENCE & NICHOLSON LTD., MARYBOROUGH, VICTORIA
Sole and Technical Service—575 HOORKE STREET MELBOURNE, VIC.

In practice, the device works as follows: the tins are delivered to the electro-magnetic conveyor. This consists of a two-rail track and a motivating rail, which together make up an elongated electro-magnet with three poles. The tins are held in an upright position against the two outer rails which form the track. They are moved forward by travelling waves of magnetic force induced in the middle motivating rail, at a speed which can be varied.

This system combines flexibility with safety. The cans cannot bump, as they automatically remain at the crest of the wave, and consequently at a fixed distance from each other. The rate of delivery can be modified at will by increasing or reducing the motivating wave's speed. [2532].

Stitching Machines for Boxmaking

Developed to meet the particular requirements of the food packaging and canning industries for high-speed packing of their products, several new stitching machines have been put on the market this year by a British company. Foremost among these are the bottom flap container stitcher



Stitching machine for boxmaking.

and top flap container sealing machine, both of which are equipped with the 85 rotary cam stitching head which gives maximum stitching results at high speed over long periods.

Using broad flat wire, sealing by small, strong stitches, each measuring $\frac{1}{8}$ in. along the crown, provides a method which is pilfer-proof and immune to climatic conditions. Up to 400 containers per hour can be bottom stitched, prior to the cases being filled.

A rigid box stitcher and two other models of rigid and folding box stitchers are also made by the company; all these work at high speed, and 300 stitches per hour can be inserted in the making of cardboard boxes and containers. [2646].

FOR
ACID-PROOFING
TANKS — PIPELINES
DRAINS — FLOORS
USE

NONPORITE
Ceramic & Permelastic
Cements

SALES AND SERVICE

Sole N.S.W. Representatives :

McKinlay, Fletcher
Pty. Ltd.

277 CLARENCE STREET
SYDNEY

Telephone: M 2775

SPRAY
PAINTING

All types of finishing —
Lacquer, Enamel, Paint, Flock,
Wrinkle, Spatter — done for
the Trade.

Specialists in
Stove Enamelling

Ring LA 1437

J. & F. BROCK BROS.
Pty. Ltd.

5 INKERMANN STREET
ST. KILDA, VIC.

OFFICE MACHINES
AND OFFICE SYSTEMS

FACTORY JOB CLOCKS. Models for
up to 16 to 50 employees, £48.
Various other models up to £81/10/-.
ACCOUNTING AND BOOKKEEPING
MACHINES. Types Statement and
Ledger Sheet simultaneously, accumu-
lates Sales and Credit Totals, proves
the work and issues up to date State-
ments at any time. Installing in-
structions given and necessary system
prepared and printed.
INVOICE MACHINES. Types the
Invoice and simultaneously adds and
accumulates the sales and proves the
addition, also adds the sales tax.
OFFICE FURNITURE. Steel Cup-
boards, Filing Cabinets, Machine
Stands, Steel Typists and Office Chairs
(18 kinds), Oak Desks (Typists and
Executive).
OFFICE MACHINES. Duplicators,
Multigraphs, Ronetypers, Adding
Machines, Calculators, Typewriters,
etc.

LEWIS

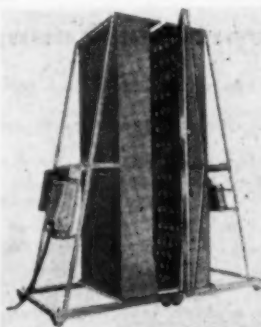
Office Machines Co.

Shop, Showroom and Repair Dept.
4 ALBERT PLACE, 187 PITT STREET.
Phone: BW 6864. 4 Doors from G.P.O.

Infra-Red Plant
for Stoving
Tubing

Built specially for the rapid
stoving of paint on conduit tubing,
the infra-red lamp plant shown in
the illustration was designed to
fit into a continuous production
line in which the tubes are car-
ried on a conveyor through the
complete finishing process which
includes automatic dipping, drain-
ing, flash-off, stoving and forced
cooling. The plant comprises two
opposing sections each 4 ft. wide,
and containing a total of 256
Osram infra-red reflector lamps.

Lamps are mounted in second-
ary reflectors of a special alu-
minium alloy so as to prevent loss
of heat by stray radiation and to
avoid the cooling effect of
draughts. A gap between the top
reflectors allows the work, which
is suspended from the overhead



Infra-red plant for stoving
tubing, fits into a continuous
production line. The two sec-
tions carry 256 Osram infra-red
reflector lamps.

conveyor, to be carried into the
plant, and doors with inner re-
flecting surfaces are provided on
each side so that the plant may
also be used for batch production.

Each section of the plant has
an outer casing of sheet steel to
exclude dust and dirt and is sup-
ported on an angle iron frame-
work which is mounted on wheels
to allow easy removal from the
working position for cleaning and
maintenance. Fume extraction
equipment is fitted in the plant.

Stoving time is about 3 to 3½
minutes for tubes ½ in. to 2 in.
outside dia., and up to 10 ft.
in length. The tubes can be passed
through the plant in two or three
parallel staggered rows and out-
puts of up to 900 lengths per hour
can readily be obtained.

Total electrical loading of plant
is 65 kW, drawn from a 3-phase
supply. [2649].

JOHNS

MOULDING PRESSES

The JOHNS Vertical
INJECTION
MOULDING MACHINE

(as illustrated)



The JOHNS Vertical INJECTION MOULDING
MACHINE embodies the following OUTSTANDING and
EXCLUSIVE FEATURES:

- ★ "TAPER-FLO SPREADER"—for faster plasticising and lower operating costs.
- ★ AUTOMATIC CYCLING—on Push Button Control.
- ★ PRECISION-BUILT—for sustained performance.
- ★ INTERCHANGEABLE PLASTICISING CYLINDERS—to provide larger mouldings of low density materials.



Sole Selling Agents :

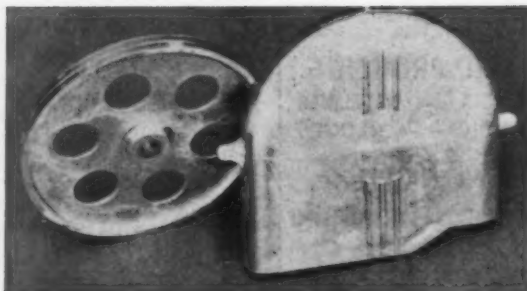
L.J. HERMAN & COMPANY

Factory Representatives

372 POST OFFICE PLACE, MELBOURNE

Phone: MU 6568.

Cables and Telegrams: "LENHERMAN," Melbourne.
Branch Office, Sydney.



Wheel and cover for a bandsaw machine; the fine finish requires very little dressing and machining.

(At Left): Some Clingan Bros. products, all gravity die-cast, with examples of steel coring.

Gravity Die-casting

Rapid Growth of Enterprising Young Firm

Die-casting provides the means of producing unlimited quantities of castings of such uniformity and accuracy that machining costs are either reduced greatly or eliminated entirely.

Pressure die-casting, in which process a plunger forces molten metal into steel dies or moulds, is used where large quantities of castings are required.

Gravity die-casting, on the other hand, is the process used where smaller quantities are required, say, 200 casts at a time. Gravity die-casting, it is claimed, is more economical for these smaller quantities. In this process, the operator pours the molten metal into the mould from a ladle, each operator working two or three moulds at a time.

DIE-CASTING is applicable to an endless variety of shapes over a considerable range of sizes.

These castings are inherently smooth on both external and internal surfaces because they are formed against the finished metallic surfaces of the dies and their cores. Another immediate advantage is the absence of the sand inclusions which commonly occur in sand castings.

The need for constantly re-making sand moulds led to the development of permanent moulds

of iron or steel. These proved ideal for the moulding of low-melting-point alloys. Aluminium is particularly suited to the die-casting technique. Aluminium castings made in a steel mould practically eliminate the need for machining and give a much finer finish than would be possible in a sand mould. This method of casting, too, gives greater strength, because of the close-grain structure of die-castings.

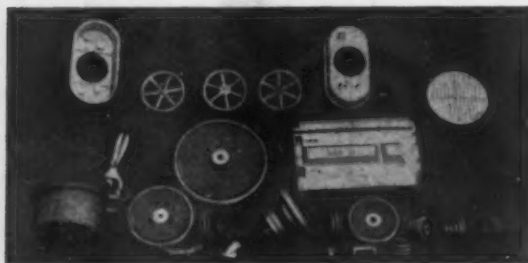
Some firms specialising in the production of die-castings employ

die-casting machines of their own design. There are also commercial makes of machines ranging from simple hand-operated types, designed for simple work and possibly small production, to highly-developed automatic machines capable of rapid production and the making of intricate castings in a great variety of forms. Small, hand-operated and semi-automatic machines on the market are used in general where mass production is not required. Some of these relatively simple types, however, are capable of

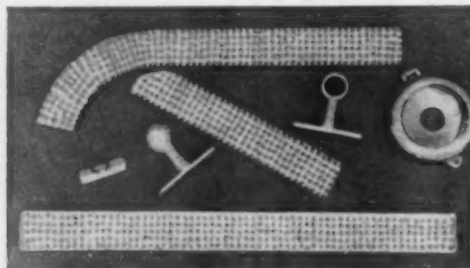
large production in the casting of small parts.

MANY USES FOR DIE-CASTING.

Alloys have been developed which possess strength, ductility, and resistance to shock to such an extent that they approach mild steel in their characteristics; and alloys are now being cast that formerly were considered impossible to handle. It is now possible to use die-castings for many purposes in machine construction for which they could not be used only a few years ago.



The gravity die-cast units illustrated show the wide range of work carried out by Clingan Bros.



Gravity die-castings in aluminium for bus fittings.



Teapot spouts; an example of slush casting.

The automobile industry is the "star" customer for die-castings. The Rolls Royce Company uses the gravity technique extensively. The cylinder blocks for aero-engines are gravity cast in aluminium alloy.

Many small machines are assembled almost completely from die-castings. In the construction of a modern sales register, for instance, 39 zinc-alloy die-castings are used. Meat-slicers and kitchen-mixers are two examples of the small machines which are constructed in this manner.

While other firms use both pressure and gravity methods, Clingan Bros., of 99 Canterbury Road, Bankstown, N.S.W., specialise in aluminium casting by the gravity process. The three brothers Clingan—John, Roy and Victor—began this work just over four years ago, and this young firm has since made remarkable progress. The brothers say that the increasing demand for their manufactures is due to the growing realisation by manufacturers of the superiority of many gravity cast aluminium alloys to other metals, where lightness plus strength are requisites.

During the past four years they found wide scope, for example, in the transport field. Many thousands of their aluminium parts have gone into the building of omnibuses. These parts include step treads, hand rail fittings and light fittings. Clingan Bros. have also supplied quantities of small parts in a special aluminium al-

loy to the New South Wales Government Railways.

PRODUCING HOLLOW ARTICLES.

It is interesting to point out that to obtain the teapot spouts illustrated in this article, slush-casting was used. This is a method employed for the production of hollow articles, such as a spout or door knob. The operator pours the molten metal into the permanent mould, but tips out the metal from the inside as soon as the outside is beginning to cool. The use of this method

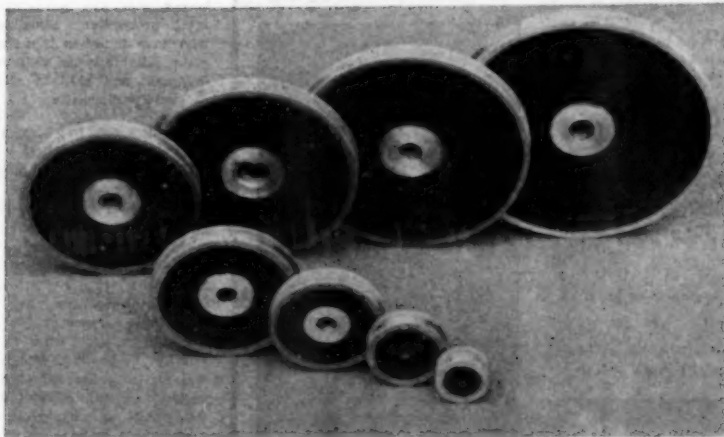
shows the versatility and enterprise of this young firm.

BIG DEMAND FOR VEE-PULLEYS.

A range of Vee-pulleys, from 11-in. to 12-in., has been one of the firm's standard productions for some time. The popularity of this product can be gauged from the fact that the company is now selling thousands of these pulleys weekly.

The wheel and cover for a band-saw machine, also illustrated, were taken straight from the die for photographing. Both pieces

show a very fine finish, eliminating the need for dressing and machining. In many castings, however, the nature of the product precludes the obtaining of such a satisfactory degree of finish—or it happens that a finer finish than that normally obtained is required to conform to a manufacturer's specifications. To meet such demands, Clingan Bros. have extended their service to incorporate expert machining of finished castings when such is required by customers. This feature of their service has been well received, especially by manufac-



Clingan Bros. sell thousands weekly of these Vee pulleys, from 11 in. to 12 in.



New modern Gas Furnaces recently installed by this enterprising Company.

Used by some of the most modern and largest foundries in Australia, as well as hundreds of other concerns.

"JAMEC" PNEUMATIC HAMMERS AND VIBRATORS

are doing a grand job

Stockists in all States

Ask for full particulars of the
JAMEC range of tools



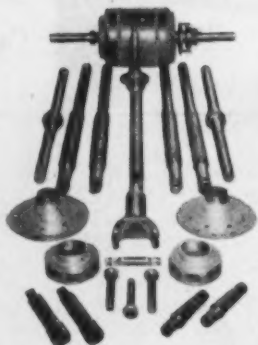
JAMEC

Made and Guaranteed by

J. MORRIS ENGINEERING CO.

403 ELIZABETH STREET, MELBOURNE, AUSTRALIA

RECONDITIONING OF WORN MACHINE PARTS



Armature Shafts, Stub
Axles, Lathe Spindles,
Hydraulic Rams, Tail
Shafts, Rollers.

Metal Sprayed with
Steel, Stainless Steel,
Bronze Monel without
distortion.

Ground back to true size.

Consult:

METAL COATINGS PTY. LTD.

16 BRIDGE ROAD, STANMORE, N.S.W.

Telephone: LA 2533

turers who are hard-pressed to meet production schedules, and who have found in this firm complete reliability as well as thoroughness and skill in all phases of gravity die-casting.

BIG SCOPE FOR GRAVITY DIE-CASTING.

Clingan Bros. have found that the gravity die-casting process offers almost unlimited scope for enterprise, research and experiment. The firm recently installed three modern gas furnaces to help cope with the heavy demands which manufacturers are making upon their services.

Whatever the future holds for gravity die-casting, Clingan Bros. will bring to the industry vigour, enthusiasm and adaptability, and they invite manufacturers to send their problems to them for expert consideration and advice. They will at all times be prepared to submit quotations and to give industrialists technical assistance to reduce their production costs where gravity die-casting will meet their requirements.

After Business Hours

(Continued from page 2.)

TRY AGAIN.

If at first you don't succeed

Try again.

These are words a man must heed.

Try again.

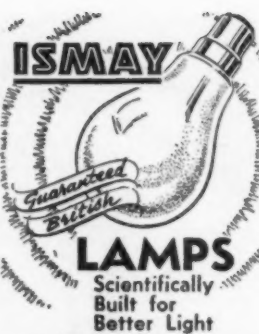
Though the going may be tough,
Though the sledding may be rough,

Never say you've had enough—

Try again.

Speaking on the matter of exports, the U.S. Department of Commerce gives the following advice: "Customs, manners, habits, buying power and living conditions affect the demand for your goods—and they vary from country to country. Ask yourself—Is your product of the type that is likely to be in demand abroad? What factors peculiar to your product might limit its sales? What local factors will influence your sales volume?" Basic data on population, per capita incomes, tastes, habits, purchasing power, seasonal trends, distribution centres and channels, transportation facilities and even political conditions are essential. You must thoroughly understand the conditions under which foreign business is conducted.

State trading, Government monopolies, import and exchange controls, and other trade barriers often intervene to impede or hinder the development of new trade outlets. In addition there are problems of taxation, trademark registration, tariff preferences, the protection of industrial property rights, the transfer of payments and similar subjects on



Australian Distributors:-
STEWART J. MATHEWS PTY. LTD.
217 William St., Melbourne, C1
Telephones: MU 6483

MANUFACTURING Capacity Available

STEEL, BRASS
and PLASTICS

Capstan Lathe Work
up to 14in.

OLYMPIC METAL INDUSTRIES

Instrument Makers and
General Engineers
LITTLE WALKER STREET,
NORTH SYDNEY. Tel.: XB 1978.

CHEMICALS—DRY COLOURS,
RAW MATERIALS FOR
INDUSTRY

H. BLEAKLEY & COY.

(1910) PTY. LTD.

397-399 KENT ST., SYDNEY.

Phones: BX 5761, BX 5762

Melbourne Office: H. Bleakley & Company (1910) Pty. Limited, C/o Age & Sun, 18 Queen Street, Melbourne.
Phone: MU 8120.

DRUGS • FINE CHEMICALS
POWDERED METALS



CANS

Printed or Plain.

FANCY METAL BOXES
KEGS AND DRUMS

RICHARD HUGHES
PTY. LTD.

A MODERN FACTORY AT
YOUR SERVICE

Phone UJ 2121 (6 lines)

59-75 Queens Rd., Fivedock
N.S.W.

THE NEW SHARPLES SUPER-D-CANTER . . .

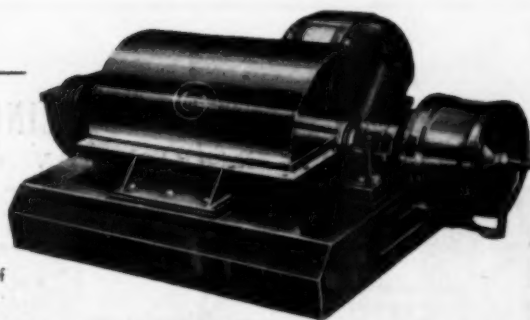
is the answer to many Process Problems involving Continuous Filtration of crystalline or amorphous solids from slurries.

- Handles any pumpable slurry . . . regardless of consistency, particle size or temperature.
- Fluctuations in ratio of solids to liquid are automatically compensated . . . a homogeneous output is assured.
- Readily adjustable for use as a Clarifier . . . as a Dehydrator . . . or as a Classifier.

THE NEW SHARPLES SUPER-D-CANTER may solve your filtration problem—consult our centrifuge engineers now.

THE SUPER-D-CANTER IS A CONTINUOUS
CENTRIFUGAL FILTER

- High Centrifugal Force—2,500 times gravity. Stainless steel bowl and liquid contact parts. Helical screw conveyor inside bowl continuously discharges solids.
- No operating labour . . . No holding tanks—continuous flow . . . No filter cloths or screens used.
- Two types—Conical and Cylindrical Bowl.



Typical Applications:

Clarification of vegetable and animal oils; dewatering of starch; recovery of polyvinyl chloride; separation of casein from whey; and many others.

The Sharple Division

Gilbert Lodge & Company Limited

Representing THE SHARPLE CORPORATION
FACTORIES IN AMERICA AND ENGLAND

Centrifugal and Process Engineers

ADELAIDE • BRISBANE • MELBOURNE • PERTH • SYDNEY

which the exporter must be informed to avoid serious loss or embarrassing delays."

Happiness may be thought, sought or caught, but it cannot be bought.

They Said—about Happiness: "Happiness is no laughing matter" (Richard Whitley) . . . "O, how bitter a thing it is to look into happiness through another man's eyes" (Shakespeare) . . . "No one can be perfectly happy until all are happy" (Herbert Spencer) . . .

"A happy man or woman is a better thing to find than a five-pound note" (R. L. Stevenson) . . . "Happiness: a good bank account, a good cook and a good digestion" (Jean-Jacques Rousseau).

FACTORY EMPLOYMENT.

There was an increase of 900 males and 300 females in factory employment during August, 1950.

The former was due to an increase of 1,800 in the manufacture of metals, machines, vehicles, etc., and of 500 in food, drink and tobacco, partly offset by decreases in textiles (200), skins and leather goods (200), sawmilling and woodworking (500), and other groups (500).

Female employment showed an advance of 800 in the manufacture of clothing, a decrease of 300 in

food, drink and tobacco manufacture and smaller changes in other groups.

The number of persons employed in Australia by public authorities (Commonwealth and State) increased by 1,800 during August to a total of \$64,600. There was an increase of 400 in the numbers employed by the Commonwealth and of 1,400 by State authorities.

IMPORTED STEEL

SHEETS (Deep Drawing, Bk., Gal.)
M.S. AND BOILER PLATE
JOISTS, CHANNELS, ANGLES
REINFORCING RODS
PIPING (Bk. and Gal.)
BRIGHT STEEL SHAFTING
WIRE & WIRE NETTING
ASBESTOS CEMENT SHEETS & PIPING
REFINED PIG IRON

Standard sizes and gauges can be offered for early shipment
from overseas

PRICES REASONABLE ENQUIRIES INVITED

Hurley & Dewhurst Pty. Limited

WINGELLO HOUSE, ANGEL PLACE, SYDNEY, N.S.W.

Telegram: "DEWLEY," Sydney

Phone: BL 2563

KEELEY WILSON & CO.

STEEL EXPORTERS

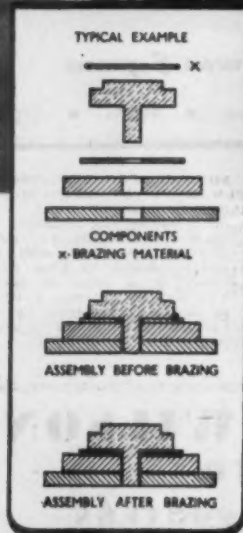
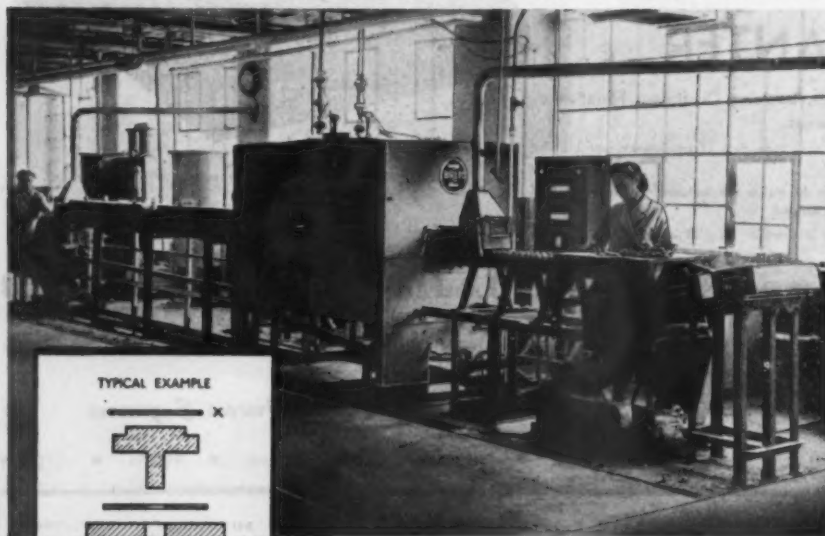
Mild Steel Angles, Beams, Bars, Rails, Flats, Rounds, etc.; Galvanized Wire, Barbed Wire and other wires; Pipes, Tubes, etc.; High-speed Steel, Alloyed Special Steels, etc.

FROM BRITAIN AND THE CONTINENT
COMPETITIVE PRICES GOOD DELIVERIES
DETAILED ENQUIRIES INVITED

**62 OXFORD ST., LONDON, W.1.
ENGLAND**

CABLES: 'KEELEY,' LONDON

BIRLEC ELECTRIC BRAZING FURNACES FOR LOW-COST FABRICATION OF SMALL PARTS



Electric Brazing Offers UNLIMITED POSSIBILITIES FOR CHEAPENING & SIMPLIFYING PRODUCTION

- No labour required except for initial assembly of components.
- A complete unit, with any number of joints, can be made in one operation.
- Several articles can be brazed at one time.
- The joints are as strong as the parent metal.
- No flux is required.
- The brazed assembly is clean.
- Stresses relieved in brazing process.
- All brazed joints are pressure tight.
- Brazing medium applied only where needed—none is wasted.

Above—Birlec continuous belt-conveyor type brazing furnace.

BIRLEC LTD.
(Incorporated in England)

51 PARRAMATTA ROAD, GLEBE, N.S.W.
MELBOURNE OFFICE — 415 LONSDALE ST.



Agents: ADELAIDE—Unbehaun & Jolmstone Ltd.; BRISBANE—Alfred Snashall, Anthon Pty. Ltd.; PERTH—Eagle & Globe Steel Co. Ltd.
WELLINGTON, N.Z.—H. P. Wrigley, G.P.O. Box 1136.

THERE'S A BIRLEC FURNACE FOR *every* HEAT TREATMENT AND MELTING PROCESS

NEW FACTORY REGISTRATIONS

NEW SOUTH WALES.

O. F. Turner & Co., 85 Walker Street, North Sydney—Leather Goods.

United Capacitors Co. Pty. Ltd., Carrington Road, Marrickville—Capacitors.

A. G. Thomas, 94 Gosford Road, Broadmeadow — Plaster Ornaments.

Payne's Sawmills, Government Road, Cessnock—Timber and Joinery.

E. Quinell & Sons, Paxton Street, Denman—Timber and Joinery.

Dumar Cement Works, Entrance Road, Erina—Cement Bricks.

John Lawler & Sons Pty. Ltd., Austin Street, Georgetown — Upholstery.

Electric Control & Engineering Ltd., 84 Tudor Street, Hamilton—Electric Switchgear.

W. J. King, Arthur Road, Hardy's Bay—Clothing.

The Perfect Stitch, High Street, Maitland—Knitted Goods.

Gannix Brick Manufacturers, Thornton, 3N—Bricks.

Newcastle Electroplating Co., 6 Bishopgate Street, Wickham—Electroplating.

V. K. Holt & Co., Lott and Harrison Streets, Wickham—Structural Steelwork.

S. T. Howell, Pacific Highway, Boambee—Timber and Joinery.

A. W. Oxenbridge, Bonville Valley Road, via Coff's Harbour—Timber and Joinery.

J. T. Smith, Wickham Hill—Engineering.

Podmore & Roberts, Joffre Street, Junee—Iron Castings.

Bolzers Cordials, 22 Union Street, Lismore—Aerated Waters and Cordials.

Peters Creameries (Grafton) Pty. Ltd., Lower Southgate, Clarence River—Ice.

A. S. Blatch, cnr. Bessemer and Regents Streets, Mittagong—Timber and Joinery.

Golden West, Caswell Street, Peak Hill—Clothing.

A. C. & D. C. Ferguson, Railway Parade, Tenterfield—Timber and Joinery.

Brough Bros., Lot 2, Five Islands Road, Unanderra—Aerated Waters.

Progressive Welders, No. 4 Wombatt Street, Young—Welding.

VICTORIA

Mahony & Baldwin, 49 Earl Street, North Kew—Engineers.

Condon Motors Pty. Ltd., 189 Burwood Road, Hawthorn—Panel Beating.

Kohn, R., 93 Errol Street, North Melbourne—Mirrors.

Everett, H. H. Pty. Ltd., 4 Raleigh Street, Spotswood—Engineering.

Federal Diamond Cutting Works Pty. Ltd., 78 Flemington Road, North Melbourne—Industrial and Commercial Diamonds.



Precision Tools

TORSION MEASURING EQUIPMENT

TENSION WRENCHES made by Warren & Brown Pty. Ltd. are recognised by Australian Engineers as the most robust, dependable, and simple to operate in the world.

SUITABLE for use on all types of Engines, Oil and Steam lines, Aircraft, Instruments and for a multitude of general engineering applications.

WARREN & BROWN Pty. Ltd.

113 BALLARAT ROAD, FOOTSCRAY, W.11

VICTORIA, AUSTRALIA

TELEPHONE: MW 1201

Dickens-Crowe, 22 Bellerine Street, Geelong—Elect. Repairs.

Newton, J., 56 Campbell Street, Swan Hill—Soft Furnishings.

Lowe, Toerman & Borstein, 735 Sydney Road, Brunswick—Shoes.

May, W. A. & W. R., 323 Canterbury Road, Canterbury—Musical Instruments.

Wilson Elect. Transformers Co. Pty. Ltd., cnr. Springvale and Wilson Roads, Glenwaverley—Elect. Transformers.

Wright, W. J., Main Road, Fern Tree Gully—Engineering.

Maller, J., 542 Sydney Road, Brunswick—Engineering.

Green, H. R., & R., Northern Highways, Huntly — Pre-fab. Houses.

Einsiedel, S. A., 234 Lt. Lonsdale Street, Melbourne—Engineering.

Glasyher, A. T., 234 Swanston Street, Melbourne—Dresses.

Hurst, R., 1294 Malvern Road, Malvern—Ass. Metal Toys.

Brayton, B. F., 153 Malop Street, Geelong—Engineering.

Johnston & Conway, 9 Mercer Street, Geelong—Springs.

Wise, C. P., rear 130 Evans Street, Brunswick—Wire Fences and Gates.

Industrial Companies and Firms

NEW SOUTH WALES.

ACE FOOTWEAR CO. PTY. LTD.—Capital: £10,000. Footwear manufacturers. Subscribers: George H. C. Roeler, Ronald W. Smith, Albert F. Farley and Ceramic F. Graham. Registered Office: 79-81 Prince's Highway, Kogarah.

ART MOULDING AND PLASTER CAST PTY. LTD.—Capital: £5,000. Manufacturers of plaques, figures, moulds, etc. Subscribers: Augusto Martelli and Lionel Dare. Registered Office: Sydney. (Lodged by Lionel Dare and Reed, 11c Castlereagh Street, Sydney.)

BELLMORE SMALLGOODS PTY. LTD.—Capital: £20,000. Smallgoods manufacturers. Subscribers: Frank Kalyk, Steven Kalyk and Irene Kalyk. Registered Office: Sydney.

BENCH DRILLS



No. 2
3 Speeds. Chuck Capacity, 1/2 in. to 1 in. Base and frame cast in one combined unit. . . . Heavy duty, ball-bearing jockey pulleys. . . . Ball-bearing thrust spindle. . . . Machined table.

No. 3, at left, is especially designed for cabinetmakers, sheet metal and glass workers.

HAND DRILLS, 1/2 in. capacity. Ideal for workshop and handyman.

COURT & BEVAN 305 ENMORE RD., MARRICKVILLE, N.S.W.

Australasian Distributors: Johnson & Gaston Pty. Ltd., Sydney. M 2145.



General Engravers

★ MACHINE ENGRAVING ★ ELECTROPLATING
★ BADGES ★ MEMORIAL TABLETS
★ BUILDING PLATES ★ METAL STAMPINGS
★ NAMEPLATES ★ STREET SIGNS

END THE BOULEVARD & THE BROADWAY
PUNGBOW, N.S.W.

"ZERISTO" CORK and "SILEX" ASBESTOS
BLACKWOOD STREET,
W. H. Brewer Pty. Ltd. NORTH MELBOURNE.
F 2684, F 9482.

INSULATION



From its inception as a manufacturing organisation, John Lysaght (Aust.) Pty. Ltd., has never permitted the quality of its products to vary. Even when demand is beyond the Company's ability to supply there is no "cutting corners" and the initial high standard that made Orb brand Galvanized Iron and Queen's Head

Flat unequalled for more than a quarter of a century, is faithfully maintained. To-day, production is on a giant and ever growing scale to meet the expanding needs of Australian manufacturers and builders, but regular inspections and careful metallurgical tests ensure that every sheet sold is fully up to standard.

LYSAGHT'S

"Growing with Australia"

John Lysaght (Australia) Pty. Ltd.

SYDNEY MELBOURNE BRISBANE
ADELAIDE FREMANTLE

2,550,817

tered Office: 133 Pitt Street, Sydney.

BICLAD PRODUCTS PTY. LTD.—Capital: £10,000. Electrical plant and equipment manufacturers. Subscribers: Rupert G. Sherlock and Basil A. M. Mottershead. Registered Office: Sydney. (Lodged by Kennedy and Kennedy, 185 Elizabeth Street, Sydney.)

GLYN, JOHN PTY. LTD.—Capital: £10,000. Clothing manufacturers. Subscribers: Arnold G. Jones and Robert C. Leahy. Registered Office: Sydney. (Lodged by Robert C. Leahy, 133 Pitt Street, Sydney.)

LANE COVE SPORTS AND GIFT STORE PTY. LTD.—Capital: £10,000. Sporting goods manufacturers. Subscribers: Charles H. E. Leyshon and Robert G. Barry. Registered Office: Lane Cove. (Lodged by Tress, Cocks and Maddocks, 117 Pitt Street, Sydney.)

SECOR, LUCY (N.S.W.) PTY. LTD.—Capital: £10,000. Manufacturer of Ladies' Wear. Head Office: South Melbourne, Victoria. N.S.W. Agent: Dorathea Ackroyd, 120 King Street, Sydney.)

INSTRUMENT TRANSFORMERS.

The Standards' Association of Australia announces the issue of a revised edition of its specification, A.S. No. C45-1950, Instrument Transformers (including Protection Current Transformers).

The 1928 edition of this specification was an endorsement of B.S. 81 and it was at first contemplated that B.S. 81-1936 could be endorsed with relatively few amendments, but the question of transformers for use with protective relays was raised and it was agreed to include specific provisions for such transformers.

Insofar as this specification relates to current and voltage transformers for use with measuring instruments, it is, in effect, an endorsement of B.S. 81-1936, with a few amendments, the most noteworthy being the elimination of 'Class CM transformers. There is not yet any British standard dealing with transformers for use with protective devices. The American standard C57.13-1948, which deals with current transformers for relaying service, was examined but it was felt that the approach in that standard could not readily be adapted to present Australian practice. No attempt is made in this Australian standard to deal specifically with all possible types of protection transformer.

Copies of the standard may be purchased from the Headquarters of the Standards' Association of Australia, Science House, Gloucester and Essex Streets, Sydney, or

LADDERS, STEPS and TRESTLES

of Every Description.
Quality Right — Price
Right.

Mote Ladders PTY. LTD.

Works :
38-44 VICTORIA RD.,
DRUMMOYNE.
Phone: WA 2821
CATALOGUE ON
APPLICATION.



from any of the Association's
Branch Offices in each State of
the Commonwealth, and New-
castle, N.S.W. Price, 5/-.

T.E.I. HAS "OPEN DAYS."

Telephone & Electrical Indus-
tries Pty. Ltd., which has estab-
lished its new factory at Faraday
Park, Meadowbank, Sydney, held
two "Open Days" recently, to al-
low their employees, their relatives
and friends to inspect the
factory and its production.

The property on which the
factory stands is now known as
"Faraday Park", but was origin-
ally the historic site of "Helenie",
which in the middle eighties was
the home of Sir Henry Parkes,
the "Father of Federation." The
modern factory buildings were
commenced in 1946 and completed
in December, 1949, and the Com-
pany now gives employment to
1,090 people, the great majority of
whom reside in the locality.

T.E.I. says it has the unique
distinction of being the only Com-
pany in Australia wholly engaged
in the manufacture of automatic
telephone exchange equipment for
the Commonwealth Government.

Nearly 1,500 people inspected
the factory over the two days, and
in addition to the extremely in-
teresting features of the produc-
tion equipment, which were ex-
plained by a considerable number
of guides, much favourable com-
ment was made in regard to the
cafeteria, locker rooms, surgery
and other employee amenities.

The visitors were entertained
as guests of the management at
afternoon tea in the cafeteria.

NEW ASBESTOS FACTORY FOR WELSHPOOL, W.A.

Recent weeks witnessed the
opening at Welshpool, Western
Australia, of the new asbestos fac-
tory of James Hardie and Co. Pty.
Ltd. Initially, the enterprise will
turn out roofing and outside walls
for 4,500 four to five-room cot-
tages per annum and, with the
completion of the plant at the end
of next year, it is anticipated that
output will be doubled.

Mr. E. W. D'Arrietta, manag-
ing director, and Mr. G. R. Sul-
ton, a director of the company,
journeyed from Sydney for the
official opening, which was per-
formed by the W.A. Minister for
Works, Mr. Brand.

"Wilcolator"

Provides

AUTOMATIC PROTECTION FOR HOT WATER SERVICES!

THE MODERN WAY TO
SIMPLIFY HOT WATER
SERVICE INSTALLATION

The Wilcolator 780-C $\frac{1}{2}$ in.
water pressure reducing valve
banishes old-fashioned over-
head cold water feed tank.



Wilcolator 780-C $\frac{1}{2}$ in. Water Pressure
Reducing Valve.

- Specially designed to control
varying main pressure to the
steady reduced pressure re-
quired for domestic hot water
services.

- Easily installed in existing homes
— saves costly ceiling installa-
tion of cold water feed tank,
with attendant structural altera-
tions.

- Approved by water supply
authorities in Brisbane, Sydney,
Melbourne and Hobart.

OTHER PRODUCTS MANUFACTURED BY WILCOLATOR:

Wilcolator Hot Water Service Thermostats
Wilcolator Electric Refrigerator Thermostats
Wilcolator Electric Range Thermostats
Wilcolator Industrial Instruments (for measurement and
control)
"ACE" Steam Control Equipment

WILCOLATOR MANUFACTURING PTY. LTD.

511-515 KEILOR ROAD, EAST KEILOR, MELB., VIC.

Telephones: FU 4449, FX 8491-2-3.

Wilcolator Sales and Service —

BRISBANE: C. F. Willers, Ryan House, 36 Bagle Street; Instrument Engineering Co., 32 Annerley Road, South Brisbane. SYDNEY:
A. E. Ackland Pty. Ltd., 187 Clarence Street; Instrument Service Co., 3 Burton Street, Glabe. MELBOURNE: A. E. Ackland Pty.
Ltd., 406 Post Office Place; Wilcolator Manufacturing Pty. Ltd. ADELAIDE: C. N. Muller, Woranda Buildings, Grenfell Street;
Unbehaun & Johnstone Ltd., 58 Gawler Place. PERTH: Atkins West Aust. Ltd., 894 Hay Street.

Industrial Minerals

and Siliceous Abrasives

Laboratory Standardised,
Ground and Froccosed to
Specification by

Austral Rock Milling Pty. Ltd.

GLADSTONE STREET
NEWTOWN, N.S.W.
Phone: LA 2585

GENERAL ENGINEERS AND

SHEET METAL WORKERS

B.S.F. PTY. LTD.

9-11 David Street
RICHMOND, E.I. Victoria
Tel.: JA 2084

The Machinery People Richardson's

281 LaTrobe St., Melbourne. MU 2221.

- Engineers' Machine Tools
- Woodworking Machines
- Portable Electric Tools
- Circular and Band Saws

ALL TYPES SAW REPAIRS

INQUIRIES FOR PLANT MATERIAL AND AGENCIES

THE AUSTRALASIAN MANUFACTURERS' INQUIRY DEPARTMENT

This Inquiry Service is for the use of readers of "The Australasian Manufacturer" who wish to trace suppliers of Plant, Equipment and Materials, and for particulars of agencies offered. Address your inquiry to the Inquiry Department, and give the fullest possible particulars to enable us to put you in touch with the best sources of supply. **INCLUDE A STAMPED SELF-ADDRESSED ENVELOPE WITH YOUR INQUIRY.** It is essential that telephone inquiries be confirmed by letter. No charge is made for Inquiry Service, but normal advertising rates will be charged if agencies are sought by manufacturers' representatives or if goods are offered for sale. For the benefit of new subscribers, inquiries will be published in two or more consecutive issues.

SPECIAL NEW INQUIRIES.

WHEN REPLYING to an Inquiry, please quote the Reference Number and send your reply to the Inquiry Department, "The Australasian Manufacturer," 16 Bond Street, Sydney. **INCLUDE A PLAIN, STAMPED ENVELOPE** so that we can forward your reply to the Inquirer.

DIVIDING HEAD FOR SALE: N.S.W. firm has for sale one new I.X.L. 5 1/2 in. centre Dividing Head, Price £38/10/-. Write Ref. 8320, c/o "The Australasian Manufacturer."

ELECTRIC MOTORS: Tasmanian manufacturer desires to purchase supplies of 1 H.P., 3-Phase (totally enclosed) Electric Motors, for equipping new machines. Quotations invited, together with prints giving dimensions, total weight, and delivery position to Ref. 8321, c/o "The Australasian Manufacturer."

ELECTRODES: Large surplus stock of Oerlikon Citocord, six and eight gauge, general purpose Electrodes. Available in Melbourne at below cost to clear. Write to Ref. 6577, c/o "The Australasian Manufacturer."

MELBOURNE FACTORY PREMISES WANTED: Sydney Maintenance Engineering firm requires factory space, Melbourne suburbs—1,800 to 3,000 sq. ft., rent or purchase, share basis acceptable. Write Vic. Even and Son Pty. Ltd., Commodore Street, Newtown, Sydney. Phone, LA 2643.

DON'T SUFFER LOSS THROUGH BLACKOUTS. INSTAL EMERGENCY GENERATOR SET: Immediate delivery, S.H. Crude Oil Alternator Set, 75 KVA, 415 V. engine, output, 80 B.H.P. Ideal Unit for emergency in blackouts. Other units also available. Particulars from Box 597, G.P.O., Sydney.

MANUFACTURE OF COOL CHEST: Designer of an electrically powered air cool chest Patent No. 58,660/50, desires to contact anyone who might be interested in the commercial manufacture of such patent. Write to Ref. 8322, c/o "The Australasian Manufacturer."

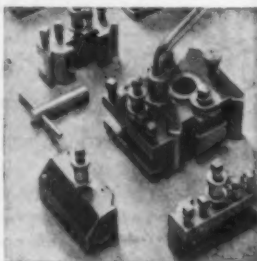
HIGH PRESSURE PUMPS: W.A. firm wishes to contact a manufacturer of small high pressure pumps, suitable for pumping agricultural sprays, such as the "Bordeaux". Write Ref. 8323, c/o "The Australasian Manufacturer."

AGENTS WANTED FOR ELECTRIC HOISTS: The manufacturers of a well-known range of electric hoists wishes to appoint active agents in Victoria, Tasmania and Newcastle. Write to Ref. 8324, c/o "The Australasian Manufacturer."

RUBBER TECHNOLOGIST. POSITION WANTED: Qualified English Technologist with 20 years' experience general rubber goods manufacture. Formerly chief chemist two leading companies. At present resident N.Z., but arriving Australia early 1951. Write to Ref. 8325, c/o "The Australasian Manufacturer."

INDUSTRIAL SAND and SHOT BLASTING
J. NORRIS & CO.
45 Pyrmont Bridge Road
Pyrmont MW 2995

FOR SALE
Travelling Head Shaper. 14in. stroke x 4ft. 6in. traverse.
For particulars, apply
R. H. GRANT,
19 Malmesbury Street
HAWTHORN, E.2, VIC.



RAPID EXCELSIOR Lathe Tool Post

Any number of tools ready set — quickly changed.

Power feed for drilling.

Tools resharpened in position.

Height adjustment.

Ask for illustration.

ACTA Pty. Ltd.

15 O'CONNELL STREET

Phone: BW 7431

SYDNEY

WATER TAPS AND TOOL-POST LATHES: Firms who are interested in the manufacture, under licence, of a patented two-piece water tap, and/or a tool-post for lathes, said to excel existing types, are invited to write to Ref. No. 8312, c/o "The Australasian Manufacturer."

MANUFACTURERS OF SMALL TOOLS and precision tools who are desirous of expert representation in the Far East, are asked to write to Ref. No. 8311, c/o "The Australasian Manufacturer."

EQUIPMENT FOR BONDING PROCESS: An American Company claiming to be exclusive manufacturers of equipment for a new impregnating process for sealing micro-porosity in non-ferrous castings designed for pressure tight applications, seeks a mutually satisfactory arrangement with an Australian firm regarding development of the process in this country. If interested, write to Ref. No. 8314, c/o "The Australasian Manufacturer."

PLASTIC MOULDINGS, DIES AND AUTO. LATHE CAPACITY

Specialists in Electrical and Industrial Mouldings. Prompt Service.
MASTERCRAFT PLASTICS
72 Parramatta Road, Stanmore,
N.S.W. LA 2665, FW 3619.

ELECTROPLATING

Applications are invited from Experienced Tradesmen in Electroplating Business and Manufacture to purchase share in established business as working partner in large country towns. Full particulars may be obtained on enquiry to: F. C. BURDON, Box 126, MOUNT GAMBIER, S.A.

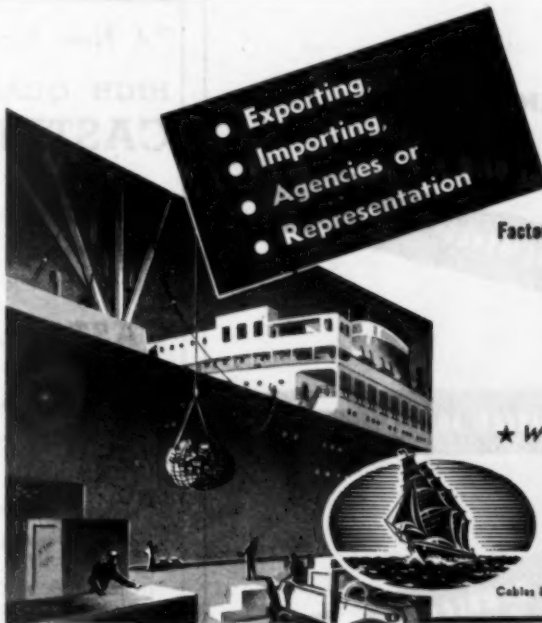
Vitreous Porcelain Enamelling

Completely Modern Continuous Furnace with Capacity
Available for Sheet Metal Enamelling

Continuous Basis Preferred

W. T. CARMICHAEL LIMITED

Rawson Street, Auburn, N.S.W. UX 7407.



CAPABLE SERVICE

Factors For Industry & Commerce About The World

Overseas interests using KUEONG representation within the Commonwealth of Australia enjoy the advantages of our alert and wholly effective services. . . . Similarly, Australian producers rely on our global associations for effective distribution in all external markets.

★ We invite enquiries . . .

• TELEPHONE BW 7322

KUEONG TRADING CO.

MANUFACTURERS' REPRESENTATIVES • WOOL BUYERS
IMPORTERS • EXPORTERS • GENERAL TEXTILE TRADERS

Cables & Tels.: "KUTRA," SYDNEY • 17 CASTLEBAGH ST., SYDNEY, N.S.W.

CUTLERY GOODS AND SURGICAL INSTRUMENTS — AGENCY AVAILABLE: Indian organisation manufacturing high class Surgical Instruments and Cutlery Goods, including scissors, desires to appoint a sole Agent for Australia. Firms interested in this inquiry will be supplied with the name of the firm on application to Ref. 8319, c/o "The Australasian Manufacturer."

EQUIPMENT AND MATERIALS AVAILABLE: Sydney manufacturer invites enquiries for

the purchase of surplus stock which is available for immediate delivery. Steel Tubing—Fluted, 900 ft. 17G. x 11 in. OD, in 12 & 15 ft. lengths. (2) Electric Motors, 1/20 H.P., shaded pole induction motors—1,440 R.P.M., 12 months' guarantee. (3) Crompton Parkinson. Reconditioned, 7½ H.P., 415V. Motor, 1,430 R.P.M., 11 amp. Rating continuous. (4) Laminations, 30,000 sets. Sizes Rotor, 21 in. OD. Stator 4½ in. OD, for shaded pole induction motors. Write to Ref. 8318, c/o "The Australasian Manufacturer."

PRESS CAPACITY AVAILABLE
HERCULES STEEL PRODUCTS
(AUST.) LTD.
PORT KEMBLA, N.S.W.

WANTED TO SELL

56 KW Bell Type Electric Furnace with double base. Internal measurements approximately 4ft. by 4ft. by 4ft. For inspection and further particulars, apply: LINDBERG FOSTER DISPLAYS PTY. LTD., 848 Church Street, RICHMOND, VIC. 'Phone: JB 1834-S.

STEEL STRIP OR OFF-CUTS: If you can supply a Victorian firm with up to five tons of 22 or 24 gauge soft steel strip or offcuts 2 1/32 in. wide or slightly wider, write to Ref. 8313, c/o "The Australasian Manufacturer."

CRINOLINE (SPRING) STEEL FOR SALE: Brisbane firm has available 19 coils each weighing approximately 1 cwt. of 4 in. wide 24 gauge Crinoline Steel Strip, rolled by one of the best known English manufacturers, for immediate delivery. For further information reply to Ref. 8317, c/o "The Australasian Manufacturer."

MILD STEEL BARS: Tasmanian organisation desires to purchase up to five tons each of the following Mild Steel Bars—

1 x 3/16 and 1 by 1. Write to Ref. 8308, c/o "The Australasian Manufacturer."

ELECTRIC HOIST WANTED: Inquirer wishes to obtain an Electric Hoist, 2 cwt.-4 cwt. capacity. Write Ref. 8305, c/o "The Australasian Manufacturer."

BESSEMER CONVERTER WANTED: New Zealand firm wants to purchase a new or used Bessemer Converter having an input of approximately 30 tons a day. If interested, write to Ref. 8304, c/o "The Australasian Manufacturer."

VICTORIAN REPRESENTATIVE WANTED: N.S.W. manufacturer of well-known brand of Small Tools, wishes to appoint Victorian Representative. Write to Ref. 8303, c/o "The Australasian Manufacturer."

ELECTROPLATING

LARGE VAT AND POLISHING CAPACITY
SPECIALISTS IN
ELECTROPLATED FINISHING
OF TUBULAR FURNITURE

MERLIN INDUSTRIAL ELECTROPLATERS
207 TRAFALGAR LANE, ANNANDALE, N.S.W. 'Phone: MW 3222.

WORKS MANAGER WANTED

Works Manager required for medium-sized Sydney Repetition Engineering firm.

Applicant to have wide experience in Automatic Lathe Work, General Engineering and Workshop Practice.

Excellent opportunity. Apply, setting out full particulars, to: "WORK MANAGER," C/o "The Australasian Manufacturer," Box 1687, G.P.O., Sydney.

answering your questions on
INDUSTRIAL BEARING REPLACEMENTS



the complete range of
TIMKEN TAPERED ROLLER BEARINGS

Whatever the load, Timken will take it! Take advantage of the toughness and precision of Timken tapered roller bearings. Economy, minimum maintenance, long life and yet further reductions of friction are engineering advantages that make your specification of Timken a "must". Select the Timken tapered roller bearings you need by calling our experts.

BEARING SERVICE COMPANY OF AUSTRALIA PTY. LTD.

All Capital Cities • Adelaide—Duncan & Co. Ltd. • Hobart—John Hood Pty. Ltd.

SURGICAL HOSIERY AND FOOT AFFLIANCES: An English firm engaged in the manufacture of two-way stretch surgical elastic fully-fashioned hosiery and surgical foot appliances (also interested in the production of certain semi-automatic shoe machines claimed to be not at present

made in the British Commonwealth) is desirous of transferring its manufacturing activities to Australia. It is interested in partnership or other form of business association with a similar existing establishment in this country. Write Ref. 8315, c/o "The Australasian Manufacturer."

CONSTANT LEVEL OILERS

Fluid control has solved a practical lubrication problem. Very many sorts of industrial equipment function efficiently only if a pre-adjusted level of lubricant is exactly maintained at certain

"A New Service"
HIGH QUALITY CASTINGS

in
ALUMINIUM ALLOY

To Any
Specification

CASTALLOY PTY. LTD.

493 Albion Street
West Brunswick, Vic.

Specialists in

Aluminium Alloys

Gravity Die-casting of all
Any Quantity or Size

Prompt Service and Delivery

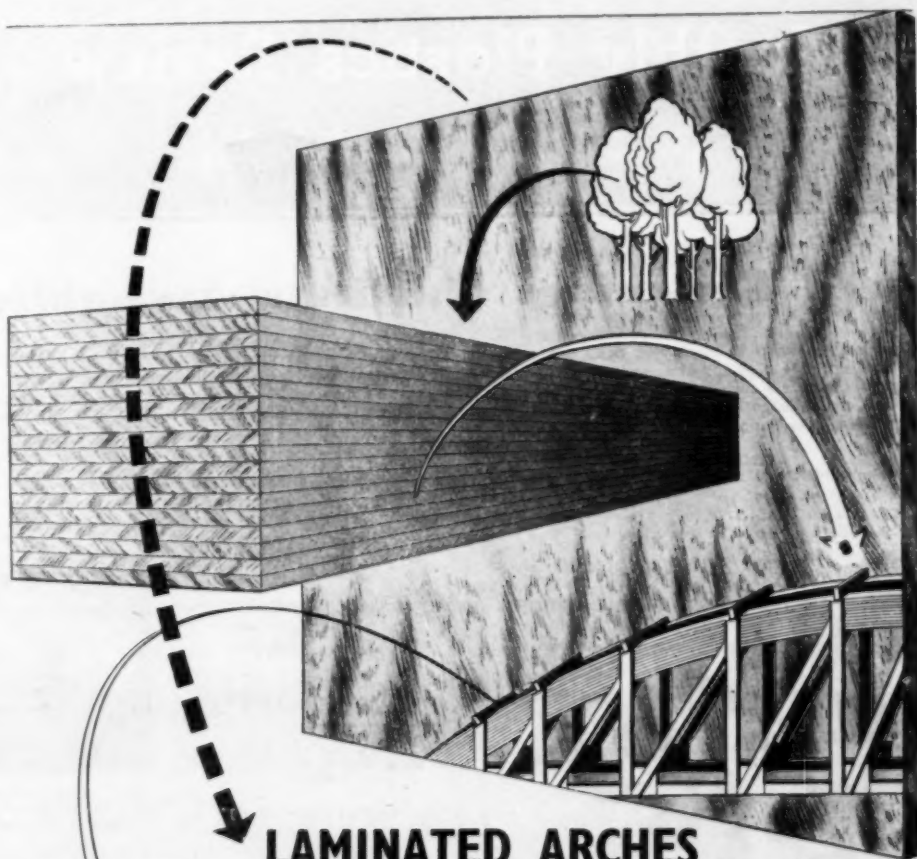
Telephone: FW 6277

points. Normal oilers for this purpose have various shortcomings: topping-up is frequently a matter of guesswork, with risk of spillage and slopping due to back surge; it is difficult to prevent dirt contamination; drainage and cleaning involve dismantling.

A constant level oiler, free of these drawbacks and with other advantages, has now been developed. Its operation is based on the principle of air compensation. A fall in the level of lubricant in, e.g., a sump, affects the lubricant level in the oiler; this latter fall uncovers the bottom of the chamfered feed tube, and admits into the reservoir air which causes an equivalent amount of lubricant to move into the oiler. The pre-set level is thus restored, and the air feed tube is sealed off.

The oiler is constructed with an interchangeable transparent reservoir, containing 4oz. or 8oz., so that the need for more lubricant is immediately apparent; a special device enables the oil level to be adjusted within a maximum limit of 1.25 in. No dirt can enter; no disconnection is needed for draining or cleaning.

Though primarily designed for lubrication, the apparatus can be put to many other uses, where a constant level of liquid is required. Such applications include feeding glue to cellophane wrappings, and moistening tobacco, textiles, or the felt pads of labeling machines.



LAMINATED ARCHES

MODERN! ECONOMICAL! DURABLE!

The manufacture of urea formaldehyde adhesives by Beetle-Elliott Ltd., has simplified and improved the construction of laminated wood arches. Glue-lines are waterproof and immune to attack by micro-organisms. Properly designed arches are capable of withstanding all the stresses of modern cantilever construction.

Investigate the advantages of laminated wood construction using Beetle Cements with your architect before committing yourself to the expense and delays associated with hard-to-get materials.



BEETLE-ELLIOTT LTD.

35 TERRY STREET, ROZELLE, NSW. Telephone WB 2521
219 CANNING ST., CARLTON, VICTORIA. Telephone FJ 4847

Monthly Plastics Review

A special section published monthly with the object of contributing to the progressive development of the Plastics Industry in Australia.

Speed Fastenings Facilitate Assemblies

Considerable saving in production costs can often be obtained in assembly operations with plastics components by the use of speed fixes, clips and other spring steel pressings which provide a simple but highly efficient method of attachment. In many cases, their use enables costs of tool-making and moulding to be reduced by obviating the necessity for moulded inserts, and in addition certain plastics components can be taken straight from the moulds and assembled without tapping or similar finishing operations.

SOME of the fastenings described in this article are designed to provide a readily removable attachment when the usage of the

tools, are available in a wide standard range, Fig. 1, or in an extensive range for special applications. There are two main

ultimate yields at from 30-200 lb., depending on the size and stud material, so that there is a very adequate margin of strength for

moulding costs and subsequent assembly time.

The moulded sifter top for the talcum container, Fig. 5, has a



Fig. 1. Standard type spring steel fastenings.

assembly demands, and others for escutcheons, name plates, etc., give a permanent fixing which cannot be removed except by the destruction of the parts concerned.

These speed fastenings, which are clipped or pushed into position by hand, or simple hand



Fig. 2. A push-on fastening for attaching components with integrally moulded plain studs.

types of special interest to the plastics industry—fixes and clips, each of which is produced in various designs and sizes.

The fix or "push-on" fastening used with plastics mouldings comprises an initial arched form of spring steel with two prongs sheared from it. On assembly to plain integrally moulded studs or rivets (Fig. 2) the arch is flattened out by a hand tool and the prongs bite into the stud giving vibration-proof locking of considerable holding power. The method of fitting these pressings is illustrated in Fig. 3.

Tests of flat type fixes show

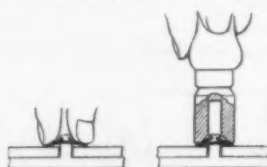


Fig. 3. The fix is located on the moulded stud by hand and is then flattened.

the relatively light duties for which these parts are intended.

In the radio set, Fig. 4, the urea moulded speaker grille and tuning scale frame is secured to the cabinet by means of six speed fixes which are firmly secured to integrally moulded unthreaded studs. Inserts and screws are eliminated and considerable savings achieved by the reduction of

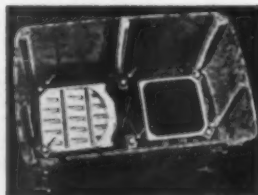


Fig. 4. The grille and scale frame are attached to this cabinet by six fixes indicated by arrows.

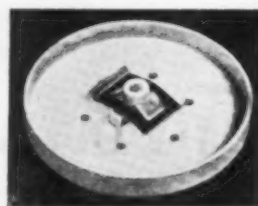


Fig. 5. This moulded sifter top for a talcum powder container, is attached to the metal body by a fix.

plain moulded stud on its underside. It is attached to the metal container by passing the stud through a hole in the top of the metal container, and then pushing on the fix; the base of the

(Turn to page 46.)

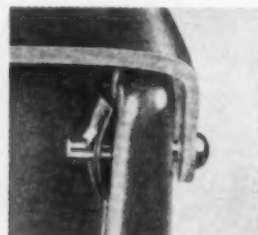


Fig. 6. An acrylic lid is hinged to the Iriginoid tray by a rivet held in position with a speed fix.

NESTORITE

MOULDING POWDERS

(PHENOL FORMALDEHYDE)

Ferguson's use one type of plant for grinding and sieving of wood-filled powders, and an altogether different type of plant for those with cotton fillers, such as A.645. Thus, in the latter, undue fluffing is obviated, scientific screening assured and all dust resulting from grinding carried away into cyclones and filters. The whole secret of "Nestorite" is the use of one exclusive type of plant for each particular powder. This gives a consistent powder. Consistent quality in powders gives consistent quality in mouldings.

SOLE AGENTS:

A. S. HARRISON & CO. PTY. LTD.

SYDNEY and MELBOURNE

The **QUALITY NAME** in
AUSTRALIAN PLASTICS



**SYNTHETIC RESINS &
MOULDING POWDERS**

TONWELL PTY. LIMITED, N.S.W.

IN ASSOCIATION WITH

CHARLES H. R. JOHNSTON PTY. LTD.

JOHNSTON'S BUILDINGS

Cnr. CLEVELAND and BUCKINGHAM STS., SYDNEY


Tel. Address: "Konfedence," Sydney.

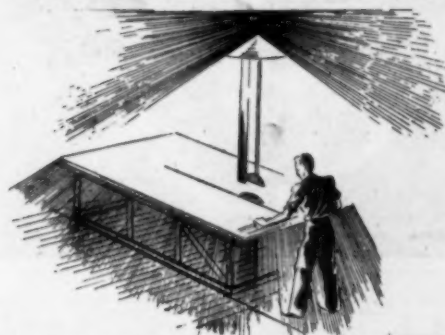
'Phone: MX 2528-9.

Queensland: J. R. Hinchley, 62 Eagle Street, Brisbane.

South Australia: R. A. Haynes, 20 Franklin Street, Adelaide.

* Regd. Trade Mark

BAKELITE  **PLASTICS**



**MOULDING MATERIALS, LAMINATED SHEET, SILENT
GEAR MATERIALS, RESINS, INSULATING VARNISH**

Technical Data and Prices available on application
from the sole Australian Agents for Bakelite Ltd.,
London:— SEND ALL YOUR ENQUIRIES TO:

O. H. O'BRIEN (Sydney)

20 Pitt St., Sydney (BW1305) and at 635 Elizabeth St., Melb. (FJ9303)

HYDRAULIC POWER TRANSMISSION

- Reversible
- Variable Speed
- Silent Operation
- From .5 to 35 H.P.
- Finger-tip Control
- Elimination of Gears and Clutches
- All Units Variable from Zero Speed

RAYMOND HYDRAULIC TRANSMISSION CO.

115 STURT STREET, SOUTH MELBOURNE, VIC.

Telephone: MX 4823

J. Gadsden Pty. Ltd.

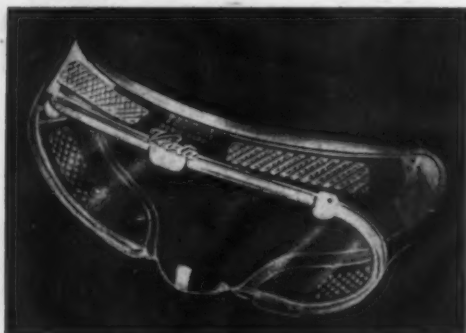
Manufacturers of

PRINTED, AND PLAIN
CANS. — STEEL CON-
TAINERS. ALSO, CANVAS
GOODS, CALICO AND
HESSIAN BAGS

Factories at

AUSTRALIA—
Melbourne, Sydney, Adelaide,
Fremantle, Hobart and Albury.
NEW ZEALAND—
Wellington, Christchurch, Auc-
land, and Dunedin.

Head Office — Abbotsford Street, West Melbourne.



MODEL: TECTOR "VISTA" GOGGLE

Fitted with 50/100" clear or green lenses. Frames optional, Acetate or Polythene (flexible), made to the latest Standard Specifications

Recommended for:

GRINDERS, CHIPPERS, SPOT WELDERS, CHEMICAL WORKERS

- Comfortable
- High impact resistance
- Lenses replaced in 10 seconds
- Ample ventilation
- Fit any face
- Fit over Prescription glasses

Distributed by all leading warehouses, and manufactured by

PROTECTOR GOGGLE CO. PTY. LTD.

The Goggle Maker of Australia for all Industrial Requirements
443/445 Kent Street, Sydney, N.S.W. 'Phone: MA 4604.

(Continued from page 44.)
metal container is spun on after filling with powder. Spring tension in the fix enables the moulded top to be rotated as required for

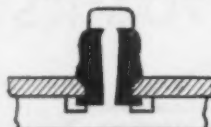


Fig. 7. A tubular clip which provides a permanent lock for integral studs where there is access to one side only.

alignment of the sifter holes. An alternative method would require a moulded insert, screw and coil spring washer.

In the pen-nib display case, Fig. 6, the hingeing of the acrylic lid is simplified, says "British Plastics", by the use of a metal rivet which is simply and effectively locked in position by a speed fix, giving full freedom of movement.

The second type of fastening is the clip, available in tubular, knob and other forms. The tubular clip, Fig. 7, affords a permanent lock for integral studs or rivets where there is access to

one side only, such as for the attachment of emblems, name plates and grilles. A variation of this clip provides a removable lock for studs or rivets, permitting parts to be easily separated when required, such as for the assembly of light take-out plates.

For the assembly of the plastics escutcheon on to a car heater, as a final operation, Fig. 8, the spring steel tubular clips are pushed into the holes in the sheet metal by thumb pressure; they are self-retaining. The plain integrally moulded studs are then

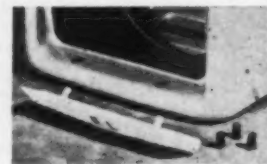


Fig. 8. The moulded escutcheon is firmly attached to the car heater as a final operation by tubular clips which bite into the plain moulded studs.

entered into the clips and pushed home. The holding power of these clips is very considerable.

making it virtually impossible to remove the emblem without breaking it.

Ring type clips for thermoplastic radio and control knobs, and D-shaped clips, for thermosetting materials, facilitate production and obviate grub screws.



Fig. 9. Ring-type clips for thermoplastic knobs and D-type clips for thermosetting materials, facilitate production and obviate grub screws.

eliminate tapped holes and grub screws, are also included in the range of fastenings. The clips frictionally engage the shaft, holding the knobs under firm spring tension; apart from the cost-saving factor they permit the knobs to be designed and styled much more freely owing to the elimination of the grub screw



Fig. 10. Control knobs with ring- and D-type clips.

hole. A group of control knobs fitted with ring type and D-shaped clips are shown in Fig. 10.

In addition to those described above, many other fastenings are available including cable clips, spring latches, coil former supports, latch clips, Fig. 11, and nuts for attaching laminates and plastics sheets in blind positions.

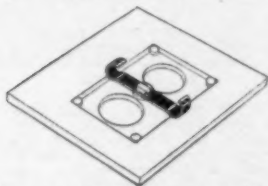


Fig. 11. The spring steel latch clip is firmly located on the integral stud of the moulded take-out plate by simple pressure.

Although threaded inserts and nuts and bolts will still provide the most effective method of attachment for many moulded components, there are obviously a



INJECTION MOULDED

IN POLYSTYRENE



If you are interested in initiating superior appearance and greater sales appeal for your product, you are invited to discuss the question of thermoplastic injection mouldings. The process, if suited to your product design, is both economical and fast.

Whatever your requirements in plastics, you'll like the way we collaborate with you, to make certain both the material and moulding process are those exactly suited to your needs.

*What do you
Require in
POLYSTYRENE?*

Production Note.

Product illustrated: Water cooler waste receptacle.
Client: James N. Kirby Pty. Ltd. Moulding: 13½ oz.
weight. Material: White polystyrene.



Walter Barr Pty. Ltd.

Division of International Products Ltd.

GILLESPIE AVENUE, ALEXANDRIA, N.S.W. MU 2467

PRODUCERS OF COMPRESSION, TRANSFER & INJECTION MOULDINGS IN ALL THERMOSETTING & THERMOPLASTIC MATERIALS

**NOW...ONE NAME ONLY FOR
ALL MONSANTO POLYSTYRENE:**



In order to simplify the identification of Monsanto plastic moulding powders, all Monsanto polystyrenes are now known as Lustrex. This one trade-name covers all Monsanto polystyrene formulae including the one previously known as Lustron. However, the several Monsanto special formula modifications to suit particular applications will be designated with suitable suffixes as shown in the table at right. This will make for convenience in ordering the correct grade of Monsanto Lustrex polystyrene for your needs.

LUSTREX One well known name for all Monsanto polystyrene.

LUSTREX L Regular polystyrene, formerly Lustron.

LUSTREX LX Heat-resistant polystyrene, formerly Lustron.

Special formulations for specific uses

LUSTREX L-PIL
General purpose polystyrene

LUSTREX L-PI
Transparent colours and crystal with superior clarity.

LUSTREX L-PIX
Improved mouldability over L-Pi, available in crystal only.

LUSTREX L-PIA
Improved mouldability in transparent colours

LUSTREX L-PIB
Translucent and opaque colours with exceptionally good mouldability.

LUSTREX LX-PIL
All the excellent properties of L-PIL plus highest heat-resistance of any commercially available polystyrene.

For full information about Monsanto's polystyrene, Lustrex, as well as other Monsanto plastics, contact:

MONSANTO CHEMICALS (Aust.) LIMITED

(Head Office) Somerville Rd., Braybrook, Victoria, servicing Victoria, South Australia and Tasmania

INTERSTATE SALES OFFICES
New South Wales, Queensland

MONSANTO AGENTS:
Western Australia, New Zealand



SERVING INDUSTRY . . WHICH SERVES MANKIND

**THE PINNACLE OF ACHIEVEMENT
IN AUTOMOTIVE VALVE ENGINEERING**

D.E.C. BRAND AUTOMOTIVE
STATIONARY AIRCRAFT

VALVES

Made in Australia from 12% Silchrome
with HIGHER CHROME CONTENT

— BY —

DREADNOUGHT VALVE PTY. LTD.

49 Ralph Street, Alexandria, N.S.W. 'Phone: MU 2501.

Distributors: C. & J. GEARS & AUTO PARTS PTY. LTD.
6 Pelican Street, Sydney



number of moulded units in which the incorporation of speed fastenings will afford marked savings in production and assembly costs.

The Spire speed fastenings described and illustrated in this article are manufactured by Simmonds Aerocessories, Ltd.

**TRACER CONTROLLED
MILLING MACHINE.**

Machining hours required to produce dies, moulds, experimental parts, and irregular-shaped pieces are said to be substantially reduced by an improved tracer-controlled milling machine. The modified unit incorporates a new design automatic tracer which, operating in conjunction with an automatic variable speed control, provides continuous variation of

have been replaced with a single unit mounted in the control cabinet, giving a range of feed from 0.010 to 4 in. in increments of 0.010 inch. A wide range of spindle speeds are provided ranging from 80 to 3,800 r.p.m.

Other advantages claimed include: a power-limiting circuit which interrupts the travel motion when a pre-set cutter load is approached; the ability to automatically reverse, either vertical or horizontal travel motion at the edge of an irregular form or cavity, thus eliminating non-cutting time; and a new design-control cabinet.

SARAN IN PACKAGING.

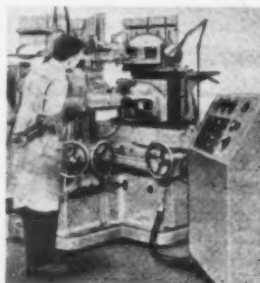
Saran film now seems definitely to be on the way toward widespread acceptance. The manufacturer has been experimenting with this material ever since the war to overcome certain fabrication problems; the company believes it has successfully overcome the most difficult of these.

Up to date, the film has been used as a packaging material primarily for cheese and dried fruits. Because of the film's low gas transmission, lack of odour, and low moisture transmission, it has proved particularly satisfactory for this purpose.

A newer use is as a wrap for liver sausage. When saran casing is used, the meat can either be cooked in the casing or stuffed in after cooking. Ends are closed by tying or clip sealing. Here, again, low moisture and gas transmission are advantages in preserving freshness and flavour as well as preventing weight losses.

Other types of packaging such as liquid packs are already on the market, and nitrogen packs are going through the experimental stage. At last reports they are meeting all requirements.

One of the major problems confronting use of saran film for packaging in the past has been the difficulty of handling it on present packaging machines. One answer to this difficulty is a modified electronic-sealing bag machine which produces a neat, strong bag from printed film at a rate of from 40 to 60 bags a minute.



This modified milling machine is said to reduce machining hours.

the individual machine motions (called for by the tracer) in proportion to the slope being followed. An automatic electric control enables tracer to glide smoothly over any contour.

New drive units for the vertical, horizontal, and transverse movements of the machine—with an increased range of travel speeds and step feeds—replace the old-style drive with their four-gear shifts. The new travel speeds are infinitely variable from 0.5 to 30 in. per minute. Step feeds, previously of limited range,

SNEDDON & KINGSTON

SPECIALISTS IN INJECTION AND COMPRESSION PLASTIC MOULDINGS AND DIES

10-14 RESERVE ST., EAST PRESTON, VIC.

JJ 1536

Another machine has been developed to use saran as an overall wrap. Previously saran has been difficult to push through a machine because of its extreme flexibility, but in this machine that difficulty is taken care of by a controlled jet of air which is blown across the space between the cutter knife and the conveyor.

NEW PACKAGE DISPENSES COSMETICS.

To-day's customer is given the opportunity to see what he is buying, in sanitary and economical packages that are appealing to look at, easy to use, and highly efficient.

Polyethylene is playing an ever-



The new container, shown in a transparent cylinder, dispenses cosmetic and other creams from a tube of polyethylene film by a simple twist of the cylinder's base.

increasing role in the production of these useful packages. Flexible bottles, vials, and useful boxes are moulded from polyethylene for the sales advantage that they bring to a long list of products. As thin film, this plastic is being utilised for packaging such varied products as nuts and bolts, soap and potting soils.

Among the newer products being made is a bottle from this

versatile plastic used for packaging sun tan lotion. Chief among its advantages is that a moulded-in spray head makes it possible to apply the lotion by merely squeezing the bottle, thereby helping the ardent sun bather acquire a tan without messy fingers, gritty sand, or the need for assistance. The flexible bottle also eliminates breakage while being transported to the beach since the bottle will bounce harmlessly when dropped and has a closure that prevents leakage.

The new lotion that the flexible bottle contains is applied uniformly on the body, arms and legs, and dries quickly. The lotion is said to be non-toxic and non-irritating.

Another new package is used for dispensing cosmetics and other types of soft creams in a novel arrangement that is said to dispense from 4 to 15 per cent. more of its contents than regular collapsible tubes. The package consists of a tube of polyethylene film which contains the cream held inside the cardboard cylinder. The plastic tube is secured at the top to the metal neck of the cylinder and at the bottom with a simple spring to a metal collar. By turning the base, the plastic tube is twisted and the contents are forced out. The package is being suggested for such materials as toothpaste, cosmetic creams, medicinal creams, and household and automotive waxes and cleaners.

PHENOLIC ADHESIVES HAVE AMAZING BOND STRENGTH.

Few cold setting synthetic adhesives display such amazing bond strength even under the most arduous service conditions as does Cellobond J2771. This adhesive is one of a specially stabilised range developed by British Resin Products Ltd., for Australian distribution by their agents, L. J. Herman & Company.

The material finds wide usage in the preparation of many materials, including composite wood

Leave it to Marquis



Amongst our many standard mouldings may be the very item you are looking for. In any case, we would be pleased to advise and quote you for all types of custom moulding.

Long experience, extensive plant and technical skill have made Marquis the big name in Plastic Moulding.

MARQUIS PRODUCTS
are manufactured by

*Commonwealth Moulding
Pty. Ltd.*

242-246 PRINCES HIGHWAY, ARNCULFEE, N.S.W.

Telegraphic and Cable: "COMMOULD," Sydney. Phone: LX 1236 (8 lines).

"SEAMLESS CONTAINERS"

— the inexpensive "tins" made of cardboard with tinplate lids — suitable for WAXES, POLISHES, SEALING COMPOUNDS, OILY AND DRY DISINFECTANTS, FERTILISERS AND SIMILAR PRODUCTS.

Available from

SEAMLESS CONTAINERS PTY. LTD.

41 RILEY STREET, SYDNEY. Tel.: M 3472.

CUSTOM COMPRESSION MOULDERS AND INDUSTRIAL TOOLMAKERS

We are specialists in:

PRECISION MOULDINGS
FINE TOLERANCE WORK
TRANSFER AND COMPRESSION

Moulders for the Trade of:

ELECTRICAL HOUSINGS
INDUSTRIAL HOUSINGS
SWITCHGEAR
TELEPHONE EQUIPMENT
RADIO PARTS
VALVE HANDLES

Suppliers of Heavy Duty Pelleting

HELIO PLASTICS Pty. Ltd.

27 GROSE STREET, CAMPERDOWN, SYDNEY LA 3509

USE . . .

Raytherm Electronic Heat for Compression and Transfer Moulding

RAYTHERM High Frequency Preheating Units have boosted production for many plastic moulding companies.

RAYTHERM was the first practical industrial H.F. dielectric preheater designed and produced in Australia.

We are specialists in this field and want you to profit by our experience; so, for increased production and lowered costs, write us for details and specifications.

A. R. EVERITT Electrical Engineers

11 HANIGAN STREET, PENSHURST,
SYDNEY N.S.W. - - - LU 2942

MANUFACTURERS

RAYTHERM ELECTRONIC EQUIPMENT

Chain for all Purposes

Crane and Pulley Block Chain, Coil Chain, Agricultural Chains, Saddlers' Hardware and Non-skid Chains, etc. Suppliers of Chain to Government Stores and Railways.

BENNETT CHAIN CO. PTY. LTD.

Makers of Chain for All Purposes

ALFRED STREET, VALLEY, BRISBANE, N.I., QUEENSLAND.

REPRESENTATIVES:

W.A.—T. R. LEWIS, 140 Murray St., PERTH. S.A.—S. W. SCRYMGOUR, Industrial Buildings, King William St., ADELAIDE. Tas.—ENSLLOW & ENSLOW, 84 Liverpool St., HOBART. N.Z.—W. A. JOHNSTON, 84 Customs St., AUCKLAND. N.S.W.—HOWARD VAUGHAN (AUST.) PTY. LTD., 383 Kent St., SYDNEY.

structures and plywood by cold press process, and the bonding of such materials as leather, all types of timbers, phenolic mouldings, laminated materials, high density plywood, and expanded products—e.g., onazote, etc.

The maximum strength is obtained without the use of high clamping pressures and setting times as low as a few hours are normal.



Tennis Court Marker.

Tape for marking base lines, service lines, and other lines on tennis courts is extruded of vinyl. Unlike cotton tapes which rot, stain, discolour, or break, the vinyl tape will not rot, will stay white, and is unaffected by water or by the chemical weed killers used on tennis courts. The tape, known as Rextrude, is made in two sets. One, for courts where playing traffic is light, is stapled to the ground. Heavy duty set, for public courts which are used frequently, has holes 2 in. apart, for nailing tape to the ground.

When used in conjunction with timber it is not uncommon for wood failure to occur before the blue line itself fails. Immunity to fungi, hot and cold water and atmospheric extremes have helped this adhesive to gain an enviable reputation with fabricators of those materials mentioned above.

Further information is readily available on request from the sole Australian Agents: L. J. Herman & Company, 372 Post Office Place, Melbourne.

STRIP DEFEATS CORROSION.

Plastics and metals combine in a new solution to the old problem of corrosion. In general the

heads and bases of rivets, especially of the hollow type, are very vulnerable as are overlapping joints, and surface irregularities in metal and wood products. In particular, aircraft of all-metal stressed skin construction call for special attention, as the surface must not only be corrosion-proof, under all weather and operating conditions, but also smooth. The treatment conferring these qualities must not add appreciably to the aircraft's weight.

The stoppers and fillers usually used suffer from certain disadvantages: vibration and tropical rains tend to crack them, with consequent deterioration of the finishing coat.

A light seal, proof against the worst climatic and flying conditions has been developed. It consists of a thin metallic (usually aluminium) foil coated on one side with a thermoplastic adhesive.

Application is easy: The surface for treatment is thoroughly



The tube roll-up, moulded of styrene, is a simple lever which slips over the bottom of a collapsible tube so that the contents can easily be ejected by rolling up the tube neatly instead of squeezing it. After the tube has been emptied, the roll-up can be withdrawn and used again. The tube roll-up is moulded in various bright colours.

cleaned and coated with quick-drying adhesive. The foil is applied and "ironed" with a thermostatically controlled iron at 115 deg. C. When cold, the foil is securely fastened, but retains its flexibility indefinitely.

The adhesive, compounded of special resins and a metallic chromate possesses exceptional

Save—

**WEAR ON BEARINGS
AND COSTLY MAINTENANCE
THROUGH . . .**

Dynamic Balancing

LIKE THIS

FOR EXAMPLE

●The cost of doing without dynamic balancing is the cost of high machine maintenance and impaired output and overall efficiency.

The forces set up by out-of-balance rotating parts play havoc with bearings . . . set up excessive strains on machine frames . . . cause vibrations injurious both to machine and quality of machine product.

Our Service, for machine builders and plant engineers, is available for accurate dynamic balancing of all types of machine parts, electric motors and generators.

We shall be pleased to supply further information without obligation.

JONES & RICKARD PTY. LTD.

MANUFACTURERS OF SPECIALISED ELECTRICAL EQUIPMENT
525 ELIZABETH STREET, SYDNEY. MX2097

corrosion-resistance: It remains unaffected by river or sea water for 4-6 months, and by petrol, oil and solvents for long periods. The seal can be easily stripped off and re-applied for inspection purposes.

MORE DETAILS ON ANNEALING.

According to the technicians of an overseas firm, major stresses in moulded styrene parts can be alleviated by: (1) Controlling the design of the product and the design of the mould to eliminate the physical cause of the stresses; (2) Proper regulation of moulding

been set up by machining and fabricating. After-annealing may be accomplished by: (1) heating the moulded part in a circulating air oven; (2) immersing it in a hot water bath, or (3) subjecting it to uniform infra-red radiation.

These technicians have determined that the annealing of many styrene articles may be accomplished by any of the three mediums at temperatures of 150 deg. to 175 deg. F. for periods of from 1 to 3 hours. The hot water bath can be arranged more quickly and with the least financial outlay. The circulating air oven and infra-red radiation methods of annealing are also easily managed



Left: Styrene battery cells are after-annealed by infra-red radiation. At right, water vessels are being treated by electric forced-air circulation oven.

conditions; (3) Annealing of the part in the moulding machine before removal; (4) After-annealing of the finished part in a suitable heating medium.

According to these technicians, after-annealing has proved to be the most economical method of relieving stresses and, furthermore, is the most versatile in that it also may be applied to moulded objects in which stresses have

and provide easy control of the process after definite temperatures and exposures have been determined for individual plastic products.

Correct annealing time and temperature must be determined experimentally to suit each individual product. A simple test involving the immersion of the specimen in a petroleum solvent

FOR YOUR BASIC MATERIALS—

BX

PLASTICS Ltd

SUBSIDIARY OF THE BRITISH XYLONITE COMPANY LTD

Manufacturers of the original Xylonite, BX Plastics Ltd. have unrivalled experience in the production and applications of thermo-plastic materials. This experience is always at your disposal on request.

XYLONITE (Cellulose Nitrate)

In all colours and beautiful configurations. Sheets, rods or tubes. Waterproof, splinter-proof, resistant to dilute acids and other chemicals.

Typical Uses.—Combs, toothbrushes, optical frames, sun-glasses, toilet sets, games, toys, motor car side screens, office equipment, fountain pens, table tennis balls, drawing instruments, shoe heel covering, toilet seat covering, tool handles.

BEXOID (Cellulose Acetate)

Resembling Xylonite, but non-inflammable. Sheets, rods and tubes. Extruded sections. Moulding powder (the standard all-round injection material).

Typical Uses.—Motor car parts, lamp-shades, instrument panels, dress ornaments, conduit, steering wheel covering, combs, toothbrush handles, telephone instruments, torch cases, electrical plugs, extruded sections, moulded toys, knife scales.

LACTOID (Casein)

In all colours and delightful multi-shades. Sheets, rods, tubes and discs. Takes a brilliant polish. Easily manipulated and machined.

Typical Uses.—Buttons, buckles, counters, combs, dress ornaments, furniture handles, knitting pins, beads, knobs, low tension electrical accessories, fountain pens, propelling pencils, umbrella handles.

BX P.V.C.

In all colours. Flexible sheets (plain or embossed), tubes or sections. Also extrusion compound. Remarkably tough. Resistant to chemicals. Low water absorption.

Typical Uses.—Rainproofs, upholstery, hand and travelling bags, shoes, floor covering, surgical tubing, fancy belting, cable coverings and conduit, cable repair joints, dip mouldings, plating jig covering.

Australian Agents

D. C. BARRINGTON & CO.

Commerce House, 218 Flinders Street, Melbourne.

BARRINGTON HYDE PTY., LTD.

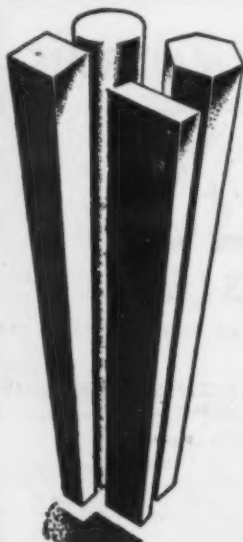
MacDonald House, 331 Pitt Street, Sydney.

New Zealand Agents

J. YOCK & CO. LTD.

P.O. Box 1002, Auckland.

BX PLASTICS LTD., CHINGFORD, LONDON, E.4 ENGLAND



Write for the "MARBRITE" PRICE FOLDER, containing full price lists, specification sheets, tolerance tables, etc.

'MARBRITE' BRIGHT STEELS

"MARBRITE" BRIGHT STEEL is manufactured in completely modern plant, to standard specifications, from specially prepared raw materials.

Metallurgically controlled on a commercial basis, through all processes, "MARBRITE" BRIGHT STEEL can be supplied in a wide range of grades and in sizes and sections to suit most needs of manufacture.

The following classes and grades are standard:

BRIGHT MILD STEEL —

- GRADE 1 — Shafting.
- GRADES 1B, 1A — High Tensile Shafting.
- GRADE 2 — Semi-Precutting Steel.
- EXTRA SUPER — Precutting.
- LEADER — Precutting for specialised purposes.
- GRADE CH2 — Case hardening.

PRECISION GROUND —

Supplied in all "Marbrite" Grades, to Standard or Special Tolerances.

BRIGHT ALLOY STEELS —

- "MARBRITE" L5 — 3 per cent, Nickel — Case Hardening.
- "MARBRITE" Q5 — Nickel Chrome — Case Hardening.
- "MARBRITE" L10 — Nickel Molybdenum — Case Hardening.
- "MARBRITE" Q7 — Nickel Chrome — High Tensile.
- "MARBRITE" R4 — Nickel Chrome Molybdenum — High Tensile.

AIRCRAFT STEELS —

To Standard Specifications

"MARBRITE" Rounds, in Grade CH2 and other suitable grades, can be supplied oversize to provide for grinding, after heat treatment.

Special Sections — A comprehensive range is available against order.

Precision ground bars are manufactured to Standard tolerances with a wide range of Round sizes from 1 in. to 6 in. diameter. Table A tolerances are within $\pm .000$ — $.002$ down to within $\pm .00025$ — $.00025$.

PLAN YOUR PRODUCTION WITH "MARBRITE" BRIGHT STEELS



"Marbrite House"

Telephone: MJ 4341

SYDNEY, N.S.W.

32-38 Bathurst Street

Telephone: MJ 4341

will indicate not only the need for annealing but also the effect of different periods of exposure and degrees of temperature in relieving the stresses in the moulded part.

Petroleum solvents for stress testing may be obtained from several oil companies upon request.

Although kerosene may be used, it has not proved as effective as some commercial petroleum solvents.

For indication of stress, the annealed or unannealed parts are immersed in the solvent for 1 minute and then are removed and allowed to drain thoroughly and

air dry. Strains will be noticeable immediately or within a 5-minute period. Because solvent testing renders the object unfit for sale or further use, this testing procedure can only be used as a production control on spot samples to determine the need for or the effectiveness of annealing.

Level out the BOMPS



PIONEER FOR SPRINGS

Est. 1890

Pioneer Spring Co. Ltd., McEvoy
St., Alexandria, Sydney, N.S.W.

P.O. 793

TRANSPARENT BLENDER.

For use in laboratories and pilot plants, a transparent unit has been announced for mixing powders, granules, or other dry materials.

The laboratory units are V-shaped like the maker's full size production units. This shape ensures a thorough blending, because the materials are alternately thrown together and divided as the shell slowly revolves. Results as to efficiency of blending, timing, and capacities are comparable with results to be



Transparency of acrylic blender enables user to observe mixing.

expected from production units. In addition, the transparency of the unit makes it possible to observe the mixing operation.

Two sizes of the laboratory blender are available: 4-qt. and 8-qt. Either size can be mounted on an adjustable cast aluminium base on which a 1/20 h.p., 120-volt, A.C. motor is mounted. The motor turns the shell at 32 r.p.m. by a chain and sprocket drive.

The transparent shells are fabricated of acrylic, with 1/4-in. Plexiglas used for the shells proper and 1-in. material used for the cover plates. The 4-qt. shell is 6 in. in diameter and 16 in. long. It is made by joining two pieces of tubing. The 8-qt. shell, 8 in. in diameter and 20 in. long, is

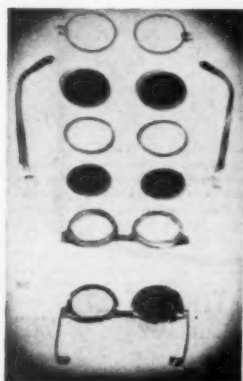
formed from two pieces of sheet stock.

Both types of shell have dust-tight charge and discharge connections with covers pivoted on one side for quick opening and closing.

SUN GLASSES ADJUST FOR LIGHT.

A research project undertaken by an overseas firm, prior to World War II, resulted in a sun glass lens which, when applied to a special goggle, proved to be of great value for anti-aircraft gunners during that war. Now several years after the war and after considerable additional development work, this war-time development has made possible the new variable light sun glass.

These new glasses differ from conventional sun glasses in that



Polarizing lenses (third and fifth rows from top) consist of film laminated between two sheets of cellulose acetate butyrate whose outer surfaces are melamine coated.

they have four polarizing lenses, two in each lens cell. The front element of each lens is fixed in position and the rear element is rotatable through a 90 per cent. arc simply by moving a small metal tab set on the under side of each rim of the frame. The rotation of these lenses results in a gradual variation from maximum brightness when the tab is at the bottom, to practically full darkness when the tab is at the other extreme.

Each of the four lenses is made up of five different components. The centre element is a thin layer of polarizing film which is laminated between two sheets of cellulose acetate butyrate. These sheets in turn are coated on their outer surfaces by a hard scratch-resistant coating, produced by adding a thin layer of a special melamine resin to one surface of a butyrate sheeting. After the complete laminate is made, the sheets—30 in. wide and 0.03 in. thick—are slit into strips of the



A. C. HATRICK PTY. LTD. The Source of Supply for—

R. C. I.

SYNTHETIC RESINS
CHEMICAL COLORS
PHENOLIC PLASTICS
INDUSTRIAL CHEMICALS
Australian Works
Bulawayo, N.S.W.

HERCULES

CELLULOSE DERIVATIVES
AND NAVAL STORES
Hercules Powder Company
Incorporated
Delaware, U.S.A.

BECKAMINE—Amine resin solutions; BECKOSOLS—Pure alkyl, phenol modified, oil and phenol modified, and non-phenolic type resins; BECKACITE—Pure phenolic, modified phenolic and non-phenolic type resins; BECKOPOL—Phenolated copals; BECKOPHEN—Urea-formaldehyde resin; PLYOPHEN—Laminating resins—ESTER GUM; DEHYDROL—Dehydrated castor oil; CHEMICAL COLORS—Organic and inorganic.



ETHYL CELLULOSE; CELLULOSE ACETATE; NITROCELLULOSE, C.M.C. (Carboxy-methyl-cellulose); PARLON chlorinated rubber; NAVAL STORES—YARMOR, pine oil, medium alcohol content; YARMOR 302, pine oil, high alcohol content; THANITE, terpene derivative; HERCULES WOOD TURPENTINE, steam-distilled; DIPENTENE No. 122; SOLVENOL No. 1; WOOD RESINS; VINSOL RESIN; TRUELINE pulverised core binder; STAYBELITE non-oxidizing resin.



EUSTON WHITE LEAD, dry and in oil; NUODEX NAPHTHANATE DRIERS, guaranteed metal contents, cobalt, lead, manganese and zinc; MANOX BLUES, bronze and non-bronze; OXIDES, black, green, red, yellow; ALUMINIUM powder and pastes; CARBON BLACK; TANNERS' REQUISITES, oils, etc.; KEENOK single roll paint grinding mills; ROGERS FULL FLOW VALVES.

Sole Australian Agents—

A. C. HATRICK PTY. LTD.

68-70 Wentmore Avenue, Rosebery, N.S.W. •
16-24 Little Pelham Street, Carlton South,
N.3. Vic. • 27 - 29 Blair Street, Wellington, N.Z.
Agents at BRISBANE • ADELAIDE • PERTH

Industrial Chemicals and Raw
Materials for Surface Coatings

Precision Built for SPEED,
ACCURACY and STABILITY

DOUGLAS

10½-in. stroke SHAPER



A PRODUCT OF

P. K. DOUGLAS

Manufacturing Engineer

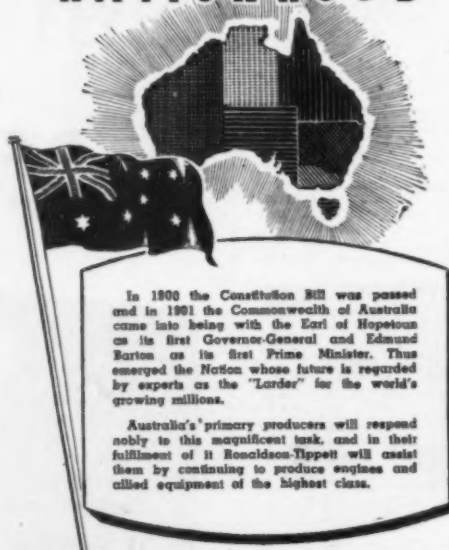
ASHFIELD, N.S.W.

AGENTS:

DEMCO MACHINERY CO. PTY. LTD.
SYDNEY and MELBOURNE

Milestones in our National Progress (6) **R.T.**

NATIONHOOD



In 1900 the Constitution Bill was passed and in 1901 the Commonwealth of Australia came into being with the Earl of Hopetoun as its first Governor-General and Edmund Barton as its first Prime Minister. Thus emerged the Nation whose future is regarded by experts as the "Larder" for the world's growing millions.

Australia's primary producers will respond nobly to this magnificent task, and in their fulfilment of it Ronaldson-Tippett will assist them by continuing to produce engines and allied equipment of the highest class.

RONALDSON BROS. & TIPPETT LTD.

(Incorporated in Victoria)

Head Office: BALLARAT, Victoria

proper width for producing the size lens required.

The strips of laminated material, in coil form, are fed through an automatic die to produce flat lens blanks, which are then formed to shape in a special automatic machine. This machine is equipped with multiple moulds which are so constructed that they may be heated and chilled very quickly.

The optical excellence of the lenses is obtained by forming the plastic blanks between perfectly ground and polished glass moulds under heat and pressure.

The finished lenses produced are then shipped to another firm, which assembles them into the completed variable light sun glasses.

OVERSEAS FASHION TRENDS.

Spring is here and the forecast is . . . high moon . . . blue air . . . and yellow sands. This summer the ladies—bless them—will have several chemise dresses. They'll be starkly simple in cut, but made of fabulous material—and for accessories they'll add the very latest in plastic buttons—

the new Beutron "Originals"—a delightful plastic combination of gold and silver with clear or coloured plastic base. They are the very last word in fashion, having been flown straight from New York.

These new buttons will reach the market in time for the spring and summer showings. The designs, while preserving gold and silver finish and feather weight-quality which is a speciality of Beutron Button, have a brand new combination of materials. Delicately scrolled and embossed gold and silver buttons are set in mounts of clear and coloured plastic which give the whole a light and shimmering effect.

They are being released in seven new designs. There are five in gold and silver and with clear plastic backgrounds, and two in gold and silver with coloured plastics surrounds.

The finish on these buttons is most attractive, the gold and silver centres give the illusion of solid metal. The gold sections are in a rich red-gold and the silver are highlighted with a gleam that shades into muted tones.

The new buttons, released in time for the change of season, are



THE PUMP IS THE HEART OF THE PRESS

Efficient press operation depends upon an efficient pump—the Electraulic Pump is especially suited to self-contained presses. It is direct driven from a 1,500 r.p.m. motor, gives a high volumetric efficiency (97%) at this speed and is remarkably smooth in operation. "Electraulic" Pumps are running year in, year out, on heavy usage without maintenance or renewals, at pressures up to 3 tons per sq. in.

ELECTRAULIC
HIGH SPEED
HYDRAULIC PUMPS

97% Volumetric efficiency

TOWLER BROS. (Patents) Ltd., Rodley, England
Australian Representatives:
N.S.W.: H. G. THORNTWHAITE & CO.
45 MARGARET STREET, SYDNEY. Phone: BX 3888

VICTORIA:
Morrecks Renburgh Pty. Ltd., 517/9 Little Collins St., Melbourne.

SOUTH AUSTRALIA:
E. Treloving & Son Ltd., Light Square, Adelaide.

TASMANIA: Douglas & Fraser, 41 Paterson St., Launceston.

QUEENSLAND:
Farbury, Healy & Co. Pty. Ltd., 10 Edward St., Brisbane.

WESTERN AUSTRALIA:
S. Y. Garraworthy, 69 St. George's Terrace, Perth.

particularly suited to this year's bright summer fabrics. The coloured backgrounds tone in with the garment, or pick up and emphasise a favourite colour in a floral design. The transparent elegance of the silver and gold buttons on clear mounts suits the light, filmy fabrics which are high fashion for 1950—as does Beutron's special lightweight manufacturing process.

COLLAPSIBLE TUBES OF PLASTICS.

Already well established as a competitor with glass in the bottle and jar market, polyethylene is now making its bid in the collapsible metal-tube field. Utilizing an inner bag of polyethylene

to effect a unique method of dispensing cream and paste formulations, a new twist container, called "Twistube," is being manufactured.

A bag of Bakelite polyethylene, inside a metal-ended cardboard cylinder 11-in. in diameter, holds the cream. The open mouth of the bag is secured to the top circumference of the cylinder, while the closed bottom is fastened with a simple spring to a metal collar at the base. When the base is turned, the resulting torque applied to the bottom of the tube forces the contents out the uncapped top in amounts which can be easily controlled.

Polyethylene was selected for this application because of its flexibility and ability to withstand the twisting to which it is sub-



Synthetic bristles in broom have longer life than natural fibres.

jected during use. The material does not deteriorate over long periods of time, is odourless, and its chemical inertness to most alkalis and acids prevents contamination of the contents.

The plastic dispensing unit is claimed to eject 99 per cent. of

IT CUTS THE HEDGES... TRIMS LAWN EDGES



- ★ Cuts any angle.
- ★ Eliminates stooping and bending.
- ★ A.C.-D.C. 32 volt, transformer or battery extra.

PHONE FOR FREE DEMONSTRATION
The MANLEY Electric ROTO-TRIMMER
(PATENT APPLIED FOR)

Manufactured wholly in Australia by

AMPLION (A'sia) PTY. LTD.

36-40 Parramatta Road, Camperdown. LA 2828.
Distributors in all States

SWEEPER BRISTLES.

Synthetic fibre bristles that can stand the abuse of being used in rotary-type powered street-cleaning equipment are now being produced. The bristles are being marketed under the trade name of Permene, a name also applied by the makers to styrene bristles used in whisk and other brooms for various household uses.

Tests of the heavy-duty bristles conducted by various municipalities are reported to show that Permene has a life expectancy many times that of bassine, palmyra, split bamboo, hickory, or other natural fibres generally used in street-cleaning machinery.

Additional qualities claimed by the manufacturer for the synthetic bristles include: greater ease in manipulation, since the water and steam baths necessary with vegetable fibre bristles are eliminated; imperviousness to water; lower labour costs in broom rewinding; and more efficient sweeping and cleaning performance.

These bristles are manufactured in lengths up to 26 inches. Although the initial cost of synthetic fibre bristles is higher than that of natural-fibre products, Permene's longer life potential more than compensates, it is said, for this disadvantage over a period of time.

IF YOUR PRODUCTS REQUIRE RUBBER COMPONENTS ADVANX WILL MAKE THEM

ADVANX
TYRE & RUBBER CO. PTY. LTD.
NEILD AVENUE, RUSHCUTTERS BAY,
SYDNEY AUSTRALIA. PHONE FA 8101



"Check me over, Doc., I'm afraid I've been working too hard since they put in air conditioning"

WHAT happens when a plant is air conditioned? On the human side, comfortable workers will be able to do more with less effort. They will be less likely to absent themselves. It will be easier to obtain staff. They will be less likely to move to apparently greener pastures.

Precise machinery will not be subjected to radical changes in temperature and humidity. It will be less likely to get out of adjustment. It will "sweat" less . . . corrode less. It will produce a more uniform product.

Air conditioning can keep raw materials uniform, too. And contribute to a more uniform product. Textiles, pharmaceuticals, paper and sweets (to mention a few) may be affected adversely by fluctuating temperatures and humidities. They may turn soft . . . may take on moisture . . . may "spoil."

Over-all, air conditioning removes many of the variables previously introduced by the passing of the seasons, hot spells, rainy spells and changing winds in industrial atmospheres. Why not let a Carrier representative explain the definite advantages and savings to be gained by using Carrier Air Conditioning?

Carrier

AIR CONDITIONING LIMITED

34-40 Bourke Street,
East Sydney, N.S.W.
Phone: FA 7144.

15-17 Lincoln Square,
South Carlton, N.J.,
Melbourne, Vic.
Phone: FJ 4234.

Penney's Building,
206-208 Queen Street,
Brisbane, Qld.
Phone: B 8148.

IF—your manufacturing schedule calls for a plastic moulding to close tolerances, in any colour, and, above all, in strictest confidence, consult without delay

CASOLIN PTY., LTD.

632 Botany Road
ALEXANDRIA, N.S.W.

Phones: MU 3051-2-3

CUSTOM MOULDERS IN ALL THERMOPLASTICS

MARTIN WILSON BROS. PTY. LTD.

200-214 MARY STREET, BRISBANE

Queensland Distributors:

BLACK & DECKER (Aust.) Pty. Ltd., Portable Electric Tools.
TECALEMIT (Aust.) Pty. Ltd., Industrial Lubrication Equipment.
"MINTEX" BRAKE & CLUTCH LININGS, for all Industrial Purposes. "SERVEX" EQUIPMENT.
HARRINGTON INDUSTRIAL PISTON RINGS (up to 42in.).

Stockists:

"Herbrand" and other Engineers' hand tools, etc.

We are open to represent other factories as
Merchant Distributors

Manufacturers' Building

(Continued from page 62.)

ticular reference to the current subjects and problems confronting manufacturers.

Fifteen names were received for the twelve positions of Executive Councillors for the ensuing year, and after a record poll the following were declared elected:—Messrs. A. Sandover, N. Temperley, T. Ellbeck, C. T. Connor, S. J. Mills, C. R. McWilliam, F. A. Johnston, L. K. Pearce, R. G. Close, B. MacKinlay, H. V. Marr and A. D. Woodford. Messrs. E. Hearn (President), N. G. Humphries and C. J. Cornish (Vice-Presidents), and E. C. Plaistowe (Honorary Treasurer), were re-elected unopposed.

In proposing a toast to the President, Mr. Ledger referred to the untiring work of Mr. Hearn during the preceding twelve months, on behalf of Chamber members. He stated that he had attended the Chamber office daily and he had done much during his brief term of President to place the Chamber to the forefront in all matters affecting manufacturers. Mr. Ledger's remarks were suitably supported by Mr. Alfred Sandover.

NEW EXECUTIVE COUNCIL MEMBERS.

Mr. Bruce MacKinlay, who is a Western Australian, assumed the local management of J. Gadsden Pty. Ltd. approximately three years ago on the death of Mr. F. Felton, who at the time was a Vice-President of the Chamber. Mr. MacKinlay was previously the Brisbane manager for his Company, and since his return to this State he has taken an active interest in Chamber affairs, particularly in regard to the Canvas Goods Manufacturing and Bedding Manufacturing Chamber Sections.

Mr. A. Woodford is the Western Australian manager for James Hardie and Co. Pty. Ltd., Rivervale, a position which he has occupied for the past eighteen months. He previously had been associated with his Company's operations in the other Australian States. Since his arrival in Western Australia, Mr. Woodford has been prominently identified with manufacturing and building activities, and is favourably known for his efforts as a member of the Building Trades Advisory Panel to the Minister for Housing.

Mr. H. V. Marr is well known by his association as Managing Director with the well known Western Australian companies of Plaimar Ltd. and Industrial Extracts Ltd. These two enterprises of which he is one of the founders, have made marked progress.

(Turn to page 58.)

24/HP.11

**Insulated
Conductors**

Lewbestos

Specially developed to overcome the hazard of high-temperature conditions. Lewbestos insulated winding wires are fireproof, heat-resistant, and exceptionally durable. A wide range of Lewbestos asbestos-insulated conductors and flexibles is available in single, twin and three core types. Write for detailed literature and samples.

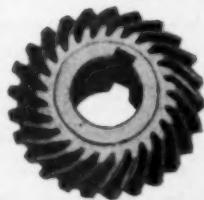
LIVERPOOL ELECTRIC CABLE CO. LTD.

INCORPORATED IN ENGLAND

190 CLARENCE STREET, SYDNEY—586 BOURKE STREET, MELBOURNE

ADELAIDE Robert C. Forbes & Co., 30a Currie St.
BRISBANE Intercolonial Boring Co. Ltd., 450 Ann St.
HOBART Wm. L. Buckland Pty. Ltd., 57 Liverpool St.

LAUNCESTON Wm. L. Buckland Pty. Ltd., 38 Charles St.
NEWCASTLE P. W. Saddington & Sons Pty. Ltd., 33 Watt St.
PERTH R. P. McInerney & Co. Pty. Ltd., 441 Murray St.



HAVING TROUBLE WITH BEVEL GEARS? THEN CHANGE TO SPIRAL BEVELS

Only SPIRALS have these advantages:

- As many as 5 teeth always in mesh, giving smooth, quiet action, and also
- reduces working load on tooth.
- Localised tooth bearing, allowing greater tolerance in assembly.
- Curved teeth keep lubricants between mating surfaces.
- The 20° long-addendum tooth form prevents interference when the pinion has as few as 6 teeth.

Capacity for SPUR and CLUSTER GEARS to 8in. diam. done by the FELLOWS METHOD.

REMEMBER! These gears actually COST NO MORE than straight bevels.

RANGE: $\frac{1}{8}$ in. to 3 $\frac{1}{2}$ in. diam. 12 D.P. to 50 D.P. 12-teeth pinions to 100-teeth crown wheels.

G. L. SHERATON

MANUFACTURING AND GENERAL ENGINEER.

**445 HEIDELBERG ROAD,
FAIRFIELD, N.20, VICTORIA**

TELEPHONE: JW 4752.



Genuine **AULD** *patent*

REDUCING VALVES

Now Available - for STEAM, AIR, GASES and WATER

Simple in design, reliable and accurate in performance. A VALVE TO SUIT ALL CONDITIONS.
"STANDARD" pattern, where reduced pressure is not less than 2/3ths of inlet pressure.
"QUITSITE" pattern, where reduced pressure is less than 2/3ths of inlet pressure.
"FULL BORE" pattern, where large volumes are to be passed.
Consult your representative for advice and recommendations on pressure reduction and regulation problems. Write for literature.

Australian Representatives: **E. TRELIVING & SON LTD.**
Light Square, Adelaide. Phone: C 4075.

Interstate Representatives—Qld.: Bakers & Ridgway Pty., 318 Adelaide St., Brisbane. N.S.W.: Duff & Macintosh Pty. Ltd., Austral Chambers, 39 Pitt St., Sydney. Vic.: W. W. J. Anderson Pty. Ltd., 26 William St., Melbourne. Tas.: Douglas & Fraser, 41 Peterson St., Launceston. W.A.: Atkins (W.A.), Ltd., 894 Hay St., Perth.

manufactured by **DAVID AULD & SONS, LTD.**, Glasgow, Scotland
reducing valve specialists for over 100 years

HARTFORD ESTAB 1810

FIRE INSURANCE COMPANY

Incorporated in the State of Connecticut, U.S.A.—Limited Liability.

Assets Exceed £100,000,000

FIRE - ACCIDENT - MARINE

Head Office for Australia:
26 O'Connell St., Sydney

Branch Offices:
Throughout the Commonwealth

AUSTRALIAN ADVISORY BOARD:
M. C. STEINER GEORGE PATTERSON
LIEUT.-GENERAL SIR IVEN MACKAY, K.B.E., C.M.G., D.S.O., V.D.

(Continued from page 56.)

gress, particularly over the last decade, and Mr. Marr is recognised as one of the leading industrialists in Western Australia. In addition to his active interests in the companies referred to, Mr. Marr also holds several other directorships.

Mr. R. G. Close came to Western Australia nearly four years ago to open a branch of the well known Australian metal container manufacturing undertaking of Rheem (Australia) Pty. Ltd., at Fremantle. Since his arrival, in Western Australia, Mr. Close has been prominently identified with Chamber activities and is a member of the Sheet Metal Work Manufacturers' Association of W.A., a section of the Chamber. Prior to coming to this State, Mr. Close was manager of the Queensland branch of his Company, and before that was associated with the Head Office in New South Wales.

PROTECTIVE FLOORING PLATES.

Design metallurgy has solved an industrial flooring problem.

For general tough-wear purposes, concrete provides an excellent flag floor surface: it is intrinsically hard, unaffected by oil or water, and skid-proof over long periods. At the same time, it has a weakness: continuous, very heavy traffic tends to destroy it: spreading surface cracks eventually break down the monolithic structure, which gives the material its main strength.

A technique of floor construction, which exploits concrete's advantages, and eliminates its defects, has been evolved. It consists basically of a metallic reinforcement of a special type, produced by long research and proved over several years under the most gruelling conditions. It reinforces, not, as usually, below the surface, but in the surface itself.

To achieve this result, both technical and practical requirements had to be met. The floor surface, though mainly of concrete, had to be without the network of weak points found in flag flooring, and the reinforcement, equally applicable to old and new floors, cheap and easy to lay, and easy to maintain.

All these conditions are met by the new floor plates. They are made of iron cast into a honeycomb hexagonal mesh with rigid walls, 1.875 in. (4.8 mm) thick and 0.5 in. (12.7 mm), and a 1 in. (25.4 mm) horizontal spacing in all directions. The plates normally measure 12 in. by 12 in. (30.48 cm by 30.48 cm) and weigh about 7.5 lb. (3.4 kg). They can be lifted and placed in position by one hand, and with normal upkeep are said to eliminate flooring troubles virtually for good.

TADCO D.C. MOTORS

3 and 1/2 H.P. and

Reverse Current Relays

Factory Representatives for all States

R. B. Churchley Pty. Ltd.

175 WILLIAM ST., MELBOURNE
Tels.: MU 1817, MU 4877.

MILLING GEAR CUTTING WELDING, ETC.

Machines Designed and Constructed to Special Requirements

H. A. WENTWORTH
PTY. LTD.

INDUSTRIAL ENGINEERS
888-848 Little Lonsdale Street,
Melbourne, Vic. MU 4360.

ELECTRICAL GRID RESISTANCES

One of our many
Specialities

Contractors to N.S.W. Railways and
30 years in N.S.W. Tramways.

TAYLOR & WEARING
UNION FOUNDRY

George Street, Redfern, N.S.W.
Est. 1889. Tel.: MX 2118.

SAFARI LITHO & PRINTING CO.
Manufacturers of

SIMPLEX TRANSFERS

818 PETER ST. MELB. 2470705 TO VISIT OUR SURFACES
140 QUEEN ST. MELB. MU3618

COAL & COKE

for
Manufacturers, Blacksmiths,
etc.

BEST STEAMING COAL
for all classes of Boilers and
Household purposes

PROMPT DELIVERY

JONES BROS. COAL

PTY. LIMITED

Bridge Road, Pyrmont,
N.S.W.

Phone: MW 2001 (5 lines)

Queensland Chamber of Manufactures

President's Speech at the Recent Annual Meeting

"In submitting to members of the Chamber the thirty-ninth Annual Report and moving its adoption, I think," said the retiring President, Mr. M. D. Davies, "that the Council has touched upon the majority of the matters which concerned us during the year under review, and which ended on the 30th June last."

"It has been gratifying to see the way the Chamber has grown in membership and to that extent in strength:—

	1948.	1950.
Membership	816	1,241
Number in Council	33	41
Investments	£3,160	£17,160
Sections	20	22
Revenue	£4,579	£11,000
Floor space	1,550	3,100

"In these days when politics intrude into practically every business activity, it must be admitted that the only organisation which receives consideration from a Government is the one whose size and influence is such that the Government cannot refrain from listening to it."

"The membership of the Chamber, which to-day is nearly 1,300, indicates that when we find it necessary to express our opinion the powers-that-be can regard that opinion as reasonably reliable. In this regard the Council has been most jealous that it shall only express itself when it is necessary, and has never endeavoured to press its own interests to the detriment of other sections of the community. I believe that as a result of this policy the Chamber is in very high standing with both the State and Federal authorities."

"Since the end of June, there have been serious developments in the inflationary spiral. This is a matter which affects everyone and it behoves all of us to take every possible step to keep it to a minimum."

"There are, of course, a certain number of people, manufacturers among them, who think that the boom engendered by inflation is to their advantage, but if history is anything to go on, I think it will be agreed that the number of such people who benefit from inflation is very, very small. The Income Tax Commissioner will take good care that he does not leave very much in the hands of this small number."

"It is very tempting to increase prices and profits in a boom period, but if everybody takes this attitude, the value of the profits so secured will quickly be worthless."

"On the other hand, if every manufacturer would strive by every means in his possession to improve efficiency and reduce his costs, also keep his profits at a reasonable figure, Australia will very quickly regain its normal economic stability."

"It was most depressing to read recently that certain leaders of the Labour movement refused to support the drive for increased production. It was gratifying, however, that no such expression of opinion has been made in Queensland, and I sincerely trust that employers will receive every co-operation from the union leaders in this State in the drive for added production, thus reducing costs."

"Whilst endeavouring to overcome artificial restrictions on output such as the 'darg' and the general 'go-slow', which applies in some industries, manufacturers must ensure that they are not guilty of the same offence, even if it is in a somewhat different form."

"I know that the Prices Commissioner's attitude towards increased prices comparable with increases in costs is irritating, and in some circumstances to an unreasonable degree is risking the stability of the manufacturers concerned. I know that in these cases there is the tendency to drop production of an essential line where the margin is small and swing to some other type of goods. No one can be blamed if they do follow this policy, but in the interests of the country it should be their very last resort."

"The Council and the office-bearers have done their best during the last two years to point out to the State Government that strict price control, as now administered, will only cause shortages so long as there is full employment."

"The shortage of iron and steel in this State has very many serious repercussions. Your Council has recently been discussing the problem with the suppliers, and whilst it is still too early to make more than a general statement, I think we can look forward to a better supply position in the near future."

"Incidentally, it was gratifying the other day to be told by two experts from the Division of Industrial Development, after a survey of engineering establish-

ALEXANDER STANDARD ENGRAVING MACHINE



This machine is made for producing the finest engraving, and also heavier work in brass or lighter steel. Its main field of application is lettering and designations of all sorts of industrial products, sunk and raised engravings of types and punches, etc.

Manufactured by
GEO. H. ALEXANDER MACHINERY LTD.
BIRMINGHAM, ENGLAND

Factory Representatives for Australia and New Zealand

LEO ROGALY AND LEWIS

PTY. LIMITED

119-123 YORK ST., SYDNEY

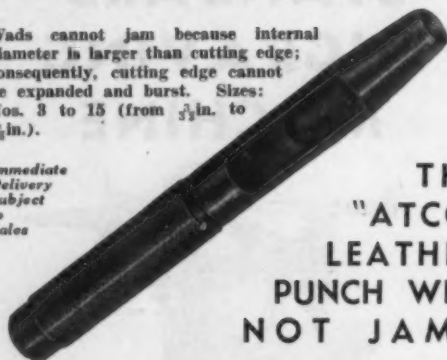
Telephone: BX 4855

Telegrams: "ALEWIS," Sydney

GUARANTEED **ATCO** TOOLS
LEATHER PUNCHES

Wads cannot jam because internal diameter is larger than cutting edge; consequently, cutting edge cannot be expanded and burst. Sizes: Nos. 3 to 15 (from $\frac{3}{8}$ in. to $\frac{1}{2}$ in.).

Immediate
Delivery
Subject
to
Sales



THE
"ATCO"
LEATHER
PUNCH WILL
NOT JAM!

AUSTRAL TOOLS
PTY. LTD.

49 ROWE STREET, SYDNEY, N.S.W.

Telegrams and Cables: "GADITUS," Sydney.

Tel.: BW 4791.

REVOLUTION



COUNTERS



LEVER or ROTARY TYPE—MODEL "CD"

A large engine revolution Counter

Specification—Counting capacity: 9999999.

Brass Case: 9 in. x 7 in. x 3 1/2 in. high.

Weight: 13 lbs.

This Model used on—Ships' Engines
Heavy Machine Tools
Brewery Plant, etc., etc.

DELIVERY FROM STOCK

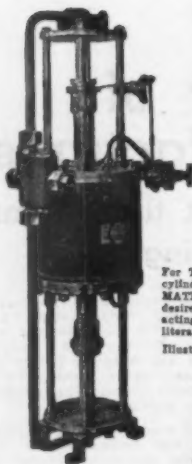
ALPHA ENGINEERING CO. PTY. LTD.

WORKS: 62-68 Layton Street,
CAMPERDOWN, N.S.W.

Phones: LA 3256-7.

CITY OFFICE: 36 Grosvenor St.,
SYDNEY.

Phones: BU 3607, BW 7397.



HYDRAULIC
PRESSURE from
your AIRLINE...

with the
AIRHYDROPUMP

For TESTING all types of castings, pressure vessels, gas cylinders, etc. **PRESSURE MAINTAINED AUTOMATICALLY.** Provides a small supply of liquid at any desired pressure up to 85,000 lbs. per sq. inch. Single-acting and double-acting models in 84 ratios. Write for literature.

Illustration shows double-acting model.

Agents in all States. Manufactured by
CHARLES S. MADAN & CO. LTD., England.

Australian Agents:

H. C. THORNTON & CO.
43 Margaret Street, Sydney. BX 3603

ments in this State, they were satisfied that they are on a par with similar establishments in other States.

"This year our annual dinner was a departure from normal, but I felt that on an occasion when we were to have so many leading southern industrialists as guests it was preferable to keep the function on a business rather than social level.

"I believe it really was a success in all respects. It may be that it will become a precedent and that in the future we shall have to consider two functions a year—one entirely social at which our ladies will be present, and the other strictly business.

"In conclusion, gentlemen, I trust that you will adopt this Annual Report, and in doing so will realise that the Council needs the co-operation of everyone of its members if it is to be really effective. I can assure you that we have a loyal staff anxious to work in the interests of manufacturers, but their results do depend on the active participation by members in the work of the Chamber. Members must accept the responsibility for supporting their own organisation, and if they do, they will reap many benefits.

"I pass on the Presidency to my successor with mixed feelings—happiness that I have seen some excellent work performed by the Chamber in the last two years, and regret that I cannot continue as your President. The period has been strenuous, and I do feel that the practice of a two-year term in the chair has much to commend it.

"I now hand over to Mr. McCray, in the firm belief that he will carry on the tradition of his predecessors and that he will receive the same support from the members and Council as I."

TARIFF BOARD
INQUIRIES.

The Minister for Trade and Customs has referred three new matters to the Tariff Board for inquiry and report, in accordance with the Tariff Board Act, 1921-1950:—(1) Balls of Ferrous and Non-Ferrous Metals: What rates of duty should be imposed on balls for ball-bearings of ferrous and non-ferrous metals imported into the Commonwealth of Australia. (2) Cigars: Whether assistance should be afforded the cigar manufacturing industry in Australia and, if so, the nature and extent of such assistance. (3) Cloth and Garment Pressing Machines: What rates of duty should be imposed on cloth and garment pressing machines imported into the Commonwealth of Australia.

These matters will form the subjects of public inquiries at a later date.

INSTITUTE OF SALES AND
BUSINESS MANAGEMENT—
NEW OFFICERS.

Following the recent Annual General Meeting and the election of the Council of the Institute of Sales and Business Management (N.S.W. Division), Mr. David Stewart (Holbrooks' A/sale, Ltd.) was elected President; Mr. W. J. H. Roots (R. E. Jeffries Ltd.) as deputy president; Messrs. K. Jackson (Standard Telephones & Cables Pty. Ltd.) and Oswald Mingay (Mingay Publishing Co.) vice-presidents; Mr. Frank Ison (Philips Electrical Industries Ltd.) treasurer. Immediate past-president is Mr. W. A. Patterson (Douglas Drug Co.). The Federal and N.S.W. Secretary is Mr. A. G. L. Harris, 39 Martin Place, Sydney.

Manufacturers' Building

Official Opening of New Premises for West Australian Chamber of Manufactures

Probably the most important event in the history of the Western Australian Chamber of Manufactures, took place, happily enough, during the Chamber's Jubilee Year. It was the official opening of Manufacturers' Building, 29-31 Barrack Street, Perth, by the Right Hon. the Lord Mayor, Mr. J. Totterdell, M.L.A., on Thursday, the 26th of October. The function, which took place in the Chamber Executive Room, was attended by members of the Chamber Executive Council and by representatives of every section or association within the Chamber. It was presided over by Mr. Ernest Hearn as Chairman of the local Board of Directors of the Chamber of Manufacturers' Insurance Limited, and Mr. J. A. Torrance, General Manager of the Company, made the trip from Melbourne especially for the opening.

MR. HEARN, in opening the proceedings, briefly introduced the Lord Mayor and Mr. Torrance to members present, and briefly referred to the negotiations leading up to the purchase

in the right direction. We are indebted to the Board of Directors and in particular to the General Manager, Mr. J. A. Torrance, of the Chamber of Manufacturers Insurance Co. Ltd., Melbourne,

status of your Chamber in our State and the progress made by the Chamber Insurance Co. in Western Australia. I am proud to record that as a result of their visit, negotiations were immediately set in train for the purchase of the Queensland Insurance Building in Barrack Street. May I here pay tribute to the foresight of the immediate past President in initiating the original negotiations with the Melbourne Board."

Mr. E. F. Atkins could not, because of ill-health, be present at the opening ceremony, and his apologies were tendered by Mr. Torrance.

From a humble beginning in a small office in Howard Street, Perth, with a membership of fifteen, the Chamber has progressed through the depression and war years until 1950 saw the culmination of years of effort by the acquisition of Manufacturers' Building, a reproduction of which appears on this page. The Chamber's progress has been closely patterned on the development of Western Australia's secondary industry. While at the turn of the century, goldmining was the chief industry, progress in manufacturing was steadily made until the

beginning of World War I. The year 1911 showed that there were 880 factories employing 16,000 employees. Four years of this conflict did little to spur the growth of manufacturing in this State, with the result that in the year 1920 the number of factories were reduced to 793. The 1920's represented the first real advance in the expansion of secondary industry, which was stemmed by the depression years of the early thirties. Probably because of the fact of not being developed industrially to the same extent as other States, manufacturing in Western Australia felt this economic impact more severely. Despite these setbacks, however, the number of industrial establishments had risen to 1,466. The five years preceding World War II saw a further growth of industrial development, with the result that when the need for the transition of peace-time production to an all-in war effort became necessary, Western Australian industry was geared to fulfil the demands made upon it. The impetus of the war years has resulted in the continued stimulation of W.A. industrial growth and each of the post-war years has seen the number of factories increased. To-day



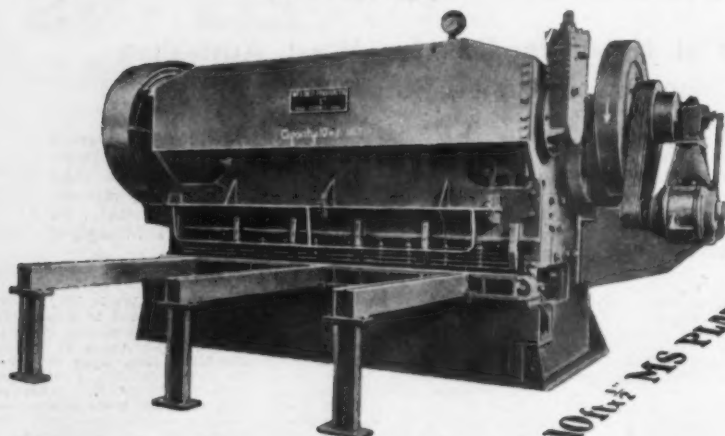
The newly acquired Manufacturers' House in Perth.

by the Company of the building. "While because of present day economic exigencies, it is not possible to provide that accommodation for members which your Executive envisages and in keeping with that of kindred organisations in the larger Australian States and other parts of the world, I feel you will agree with me that we have taken a step

for making this building possible. It was following strong representations made during 1949 by your immediate past President, Mr. J. F. Ledger, to the Victorian Board, that Mr. E. F. Atkins, a member of the Insurance Board and President of The Victorian Chamber of Manufactures, accompanied by Mr. Torrance, visited Perth to personally acquaint themselves with the



Presentation of gold key to the Rt. Hon. the Lord Mayor of Perth, Mr. J. Totterdell, M.L.A.



CUT THREE WAYS
Simultaneously
WITH THIS ALL-STEEL
GUILLOTINE

Features—Rigid back pressure beam, which supersedes the conventional fish back cutting beam. Self-contained hydraulic hold-down system. Pneumatically controlled multiple disc friction clutch and interlocked automatic brake. Screw-operated self-freeing back gauge. Patent plate splitting device enabling plate of any length to be split in widths up to the maximum depth of the gap.

★ Above—Welded Products' all steel guillotine shears, capacity 10' x 1/2" M.S. plate.

CUT COSTS, CUT TIME AND 10% M.S. PLATE

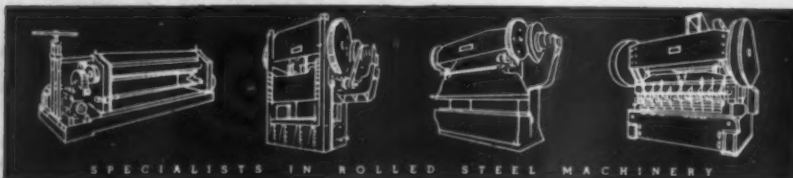
Cutting three ways simultaneously isn't a new trick—on a Welded Products' guillotine. Metal working plants, all over Australia and overseas, are doing it every day—cutting costs, cutting time, in cutting mild steel. These plants save interruptions to guillotine production through less time out for blade regrinding and renewals.

This is only one side of the cost-saving advantages of rigid rolled steel construction—you also get faster operation . . . more accurate, clean-cut work . . . reduced maintenance charges.

Exceptional blade life, rapidity, precision, low maintenance—any one of these will help reduce expenses, but combined they will make for worth-while savings in production costs per unit of output.

Welded Products Limited

94-96 O'RIORDAN ST., ALEXANDRIA, N.S.W., AUSTRALIA
Phone: MU 2401 (3 lines). Telegrams & Cables: "Walprod Sydney"



SPECIALISTS IN ROLLED STEEL MACHINERY

there are upwards of 3,000 factories, while employment has reached an all time high of nearly 40,000 workers. It is confidently felt that with the development of the new South Fremantle Power House and the South-West Power Scheme, in addition to the implementation of other major development works, this State will continue to forge ahead.

The Lord Mayor, in declaring the Manufacturers' Building open, congratulated the Chamber Insurance Company on the extension of its operations to Western Australia, particularly in regard to the faith the directors had shown in the future of the State by the acquisition of a city freehold. He said that Barrack Street, would in the future planning of the City of Perth, be one of the main arterial north-south roads to the city.

At the conclusion of the speech of the Lord Mayor, Mr. Torrance on behalf of the Head Office Board of Directors, presented to the Lord Mayor a suitably inscribed gold key, and stated that the faith of his Company in Western Australia was reflected in the decision to purchase their own headquarters in Perth. At the same time, his Directors also desired to assist the West Australian Chamber of Manufactures by providing them with a permanent home and to provide facilities for Chamber members on the lines comparable with those in Melbourne. It is also the intention of his Directors, Mr. Torrance continued, to reconstruct the existing building when conditions permitted. He referred to the need for the utmost co-operation between the Insurance Company and the Chamber of Manufactures.

JUBILEE ANNUAL GENERAL MEETING.

It was fitting that the Fiftieth Annual General Meeting of the Chamber, held at the Palace Hotel Conference Room earlier in the month, should see recorded the largest gathering of members at any W.A. Chamber function since its inception.

The President of the Chamber, who presided, welcomed as visitors the Hon. the Premier (Mr. D. R. McLarty, M.L.A.) and the Attorney-General, Hon. A. V. R. Abbott, M.L.A.; Mr. L. W. Hamilton, M.H.R., Federal Under Parliamentary Secretary for the Interior; Hon. H. Hearn, M.L.C. in addition to representatives of kindred organisations. Sir Edmund Herring, recently appointed Director of Recruiting, who was visiting Western Australia, also attended, after fulfilling an earlier engagement, and addressed the meeting on the subject of Australia's defence requirements, both in regard to manpower and materials.

Mr. Hearn departed from the procedure of former years of reading his Annual Presidential Address, which was in printed form, and handed to members present. Instead, he briefly dealt with the main headings of his address and enlarged upon the activities and service of the Chamber, with particular reference to the Jubilee.

(Turn to page 58.)

Notice To The Trade!

**METAL STAMPINGS
AND
FORMED PRESSINGS
IN 14, 16, 18 & 20 GAUGE**

WE SUPPLY ALL MATERIAL

SPECIALISING IN PRODUCTION OF
COMPONENTS FROM 20 GAUGE
DEEP DRAWING BRIGHT

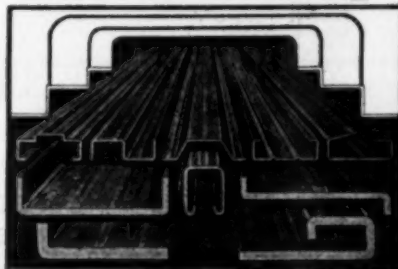
PRESS CAPACITY — 25 TONS

MANSON ENGINEERING

82 ROSENEATH STREET
CLIFTON HILL, VICTORIA

Telephone: JW 5651

PRESSINGS
for industry



Any Size or Shape. Pressings of any size or shape up to $\frac{1}{2}$ " gauge and 15' length can be supplied from our 500-ton brake press, to meet the varying needs of manufacturers.

Quick Delivery.

All inquiries are promptly attended to; deliveries of orders are immediate.

Advisory Service.

A special technical advisory service is available to clients. Write, call or 'phone:—

J. CONNOLLY LTD.

43 MOUNTAIN ST., BROADWAY

P.O. Box 47, Broadway, Sydney.

Phones M 2587-8

REX PAK and TULIP



CORRECT PACKINGS FOR EVERY SERVICE
Plastic - Metallic - Foils - Automatic Lip - Braids - Sheet Jointings - Gaskets



DRICO Thermostatic Traps for light duty
ALSO

Strainers, Sight Glasses, Temperature Regulators,
Pressure Switches and all types of Controls and Regulators.
Made by Drayton Regulator & Instrument Co. Ltd., Middlesex, England.

Basil V. R. Greatrex

PROPRIETARY LIMITED
151 SUSSEX ST., SYDNEY, N.S.W.
Telephone: RX 4717-8



**HEAVY
DUTY
GRINDER**

"Hebco" machines available from Melbourne merchants, and from E. J. Hall, BRISBANE; H. P. Gregory & Co. Pty. Ltd., SYDNEY; Harris, Scarfe Ltd. and Gerard & Goodman Ltd., ADELAIDE; and William Adams, PERTH.

H. E. BREHAUT PTY. LTD.

791 Whitehorse Road, Mont Albert, Victoria

Telephone: WX 1975

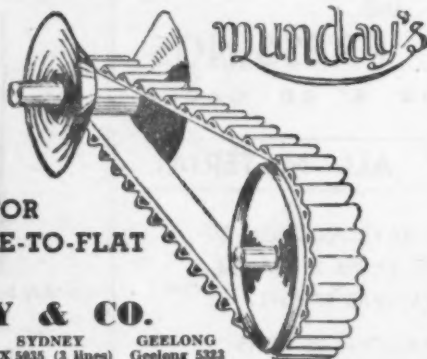
MUNDAY'S

FOR
VARIABLE
SPEED DRIVES
"RIPPLE"

LEATHER BELTS FOR
VEE-TO-VEE & VEE-TO-FLAT
ARRANGEMENTS.

JAS. MUNDAY & CO.

MELBOURNE SYDNEY GEELONG
Phones: MU 6615 (4 lines) BX 5635 (3 lines) Geelong 5323



SERVICE



good lamps
... are the **heart** of
good lighting...

Royal "Ediswan" Lamps have established a reputation over many years for consistently good service. When buying lamps for your installation, always specify Royal "Ediswan." "Good Lamps are the heart of good lighting" and good lamps mean Royal "EDISWAN."

ROYAL **"Ediswan"**
FLUORESCENT AND INCANDESCENT LAMPS

Distributors for The Edison Swan Electric Co. Ltd., England.

N.S.W.: H. Rowe & Co. Pty. Ltd.,
Swans Ltd.

QLD.: Engineering Supply Co. of
Australia Ltd. (E.S.C.A.),
H. Rowe & Co. Pty. Ltd.

S.A.: Oliver J. Nilsen & Co. Ltd.,
H. Rowe & Co. Pty. Ltd.

VIC.: H. Rowe & Co. Pty. Ltd.

W.A.: Carlyle & Co. Limited.

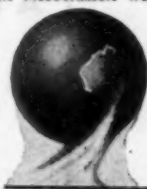
TAS.: Charles Davis Ltd.

MINERALS PTY. LTD.

318 Botany Road, Alexandria, Sydney, N.S.W.
Currie Street, Adelaide, S.A., and Perth, W.A.

Cable Address: "MINERALER," all States.

In Association with



MINERALS (VIC.) PTY. LTD.

Ingles Street West, Port Melbourne, Vic.
And 27 Elizabeth Street, Hobart, Tas.

Industrial Earths and Wood Flour Millers.

Mineral Earths & Pigments

UMBER

For all Industries



PATENT & TRADE MARK NEWS

Complete specifications lodged with the Patents Office are open to public inspection almost immediately after their lodgment. Interested persons are now able to obtain the details of an invention for which protection is being sought.

Provision is also made (Patents Act, 1948) for an applicant to obtain damages, if infringement occurs, from the date of publication of the application. A rule of practice has been established whereby an application will be examined more speedily when a prima facie case of alleged infringement is proved.

Particulars of the necessary procedure will be supplied by any Patent Attorney practising in the Commonwealth.

PATENT SPECIFICATIONS ACCEPTED

MULTI-STAGE COMPRESSOR. 138,246.—Ingersoll-Rand Co.

Claim 1. A multi-stage compressor having a frame, first and second stage cylinders mounted on the frame, an interstage passage, and inlet and discharge passages for the first and second stages respectively, characterized in that said passages are formed integrally with the cylinders and the frame.

ELECTRICALLY HEATING AND UPSETTING METAL RODS.

138,245.—M. O. Hanna.

Claim 1. In the heating and upsetting of metal rods or bars using electric resistance heating, the method which consists in placing the rod between end contacts on head and tail saddles, moving said contacts into engagement with the rod at a point close to the head saddle end while the tail saddle end remains free, passing heavy low voltage current through the end portion of the

rod between the head saddle contact and the side contacts to heat the metal of said end portion to plastic state whereupon one of the saddles, preferably the tail saddle, moves inwardly under applied pressure to cause the plastic metal to flow or be upset to bulbous form, simultaneously giving the remaining body portion of the rod between the side contacts and the tail saddle contact a slow heating by causing a portion of the current to leak through said body portion while the end portion is being heated and upset, and finally withdrawing the side contacts from engagement with the rod to allow the full current to pass through the whole length of the rod to heat the entire rod to the temperature required for subsequent forging or shaping.

Claim 4. In an apparatus for heating and upsetting metal rods or bars using electric resistance heating, a head saddle and a movable tail saddle, contacts on said saddles connected to a source of heavy low voltage current, movable side contacts adapted to engage the rod at a point close to the head saddle end while the tail saddle end remains free, a bridging conductor or conductors connecting said side contacts to the tail saddle contact, and a re-

sistance or resistances interposed in said bridging conductor or conductors.

CONTROL UNIT FOR ELECTRIC COOKERS.

138,247.—B. Ames.

Claim 1. A control device for use in an electrical cooker which receives current through a flexible conductor from a supply and which has a plurality of heating units each including resistance elements, and a pair of independent distributing switches operative to distribute current from the supply to the resistance elements of the respective units, and wherein the total energy consumption of the several units, if all were energized at the same time, would overload the supply circuit, characterized in having a master switch normally operative to deliver current from the supply circuit selectively to one or the other of the respective distributing switches, but not to both at the same time.

BELT TENSIONING DEVICE.

138,248.—Flexicon Cord Services Ltd.

Claim 1. In a power-transmission device comprising a driving pulley, a transmitting unit

having an input pulley connected by belt to the driving pulley and an output pulley connected by belt to a pulley to be driven, the provision between the frame or casing of the transmitting unit and a fixed part, of an adjuster comprising two pivotally-connected members, one secured to the frame or casing and the other to the fixed part, the distance between the said two members being adjustable by means of an eccentric rotatable in an opening in one of the members.

SELF-CLEANING STRAINER.

138,251.—John Thompson (Australia) Pty. Ltd.

Claim 1. A self-cleaning strainer, particularly for the purpose herein described, comprising a straining drum or screen arranged to dip into the water or liquid, means for rotating said drum, means for withdrawing water or liquid from the interior of the drum, a jet directing water against the inner surface of the drum as it rotates to wash off adhering matter, and means for delivering portion of the water withdrawn from the drum to the jet.

GRIFFITH, HASSEL & GRIFFITH

Established 1885

Fellows of the Institute of Patent Attorneys of Australia. Fellows of the Chartered Institute of Patent Agents, London.

Asbestos House,
York and Barrack Streets, Sydney
Tel.: BX 2849. Telegrams: "Myall"

PATENTS, TRADE MARKS AND
REGISTERED DESIGNS

PHILLIPS, ORMONDE, Le PLASTRIER & KELSON

ESTABLISHED A.D. 1886

CECIL Le PLASTRIER. GEOFFREY SLY. BERTRAM C. FITZPATRICK.
TRADE MARK AGENTS — PATENT ATTORNEYS

PROVIDENT LIFE BLDG., 37-41 QUEEN ST., MELBOURNE

Telephone: MB 2594 (2 lines)

Osborn F. Cartwright

PATENT AND TRADE MARK
ATTORNEY

350 George Street, SYDNEY

Telephone: BL 1894

Fellow, Institute Patent Attorneys
of Aust., Inc.



Going places?

It is risky to carry too much cash when travelling. The modern, safe means of payment for travellers is Bank of New South Wales Travellers' Cheques.



Bank of New South Wales Travellers' Cheques can be bought at any branch of the "Wales". Take some with you on your travels.

You will find that "Wales" Travellers' Cheques are readily cashed by all banks and accepted by principal tourist bureaux, transport offices, hotels, restaurants, and stores.



Wherever you go, at home or abroad,
carry —

BANK OF NEW SOUTH WALES

Travellers' Cheques

(INCORPORATED IN NEW SOUTH WALES WITH LIMITED LIABILITY)

A5050D



BURNED OUT MOTOR?

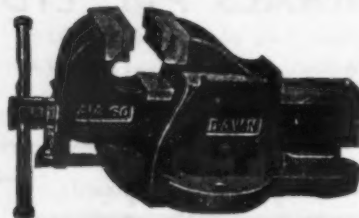
**DOWNIE will fix it
in ONE HOUR**

One hour stator replacement service for: A.G.E. and C.P. $\frac{1}{2}$ to 20 h.p. and Brook 1 to 10 h.p. motors.

S. & E. DOWNIE PTY. LTD.
The Electric Motor Firm

7 Regent Street, Redfern, N.S.W. MX 3371.

A RELIABLE DAWN PRODUCT



"DAWN" SEMI-STEEL VICES

A Complete Range of Sizes and Types for All Applications

MANUFACTURED BY

THE DAWN MANUFACTURING CO. PTY. LTD.
COBURG, VICTORIA.

Stocked by Principal Hardware Houses in all States

CHAIN-CUTTER TOOL HOLDER.

128,252.—Maver & Coulson Ltd.
Claim 1. A chain-cutter tool holder having a tool-receiving socket and incorporating a locking member spaced from the main body of the holder and formed with a distorted locking hole through which a tool-securing screw can be screwed into a tapped hole leading through said main body to said socket, the distortion being such that the action of screwing said screw into the tapped hole deflects said member so that the member exerts a locking effect on the screw.

NEW TYPE OF PERCUSSIVE TOOL.

133,254.—M. A. Stuts.
Claim 1. A percussive tool of the kind wherein a striker body is reciprocated by the action of oppositely rotating centrifugal masses mounted on it, the striker body being arranged to deliver blows to a transmitter, characterized in that two similarly rotatable outer masses at opposite sides of an oppositely rotatable inner mass are positively coupled together by connecting means surrounding their axis, and the outer masses are oppositely rotated with respect to the inner mass by gearing comprising a gear wheel coupled to one of the outer masses so as to drive it and, through the said connecting means, to drive the other outer mass, a second gear wheel coupled to the inner mass, and a driving gear in mesh with the said gear wheels, the centre of momentum of the inner mass and the joint centre of momentum of the outer masses being substantially in a plane containing the axis of reciprocation of the striker body.

MACHINE FOR EXTRACTING CORE BAR PARTS FROM HOLLOW SLABS.

128,253.—Tangyea Limited.
Claim 1. A stripping machine for extracting core bar parts from

hollow slabs, the machine comprising the combination of a main frame, gripping means whereby the slab containing the core bar parts to be extracted can be releasably secured to the frame, a pair of slides movable horizontally towards and away from the opposite ends of the frame, and hydraulic means for actuating the slides, the latter being adapted to be engaged with the ends of the core bar parts.

TRADE MARK APPLICATIONS

96,733. "Vacumatic." Devices in which rubber predominates for massaging purposes.—Jonas Yakovlevas and Eugenija Yakovlevas, 190 Bourke Street, Melbourne, Victoria.

96,757. "Ease-a-Way." Furniture.—Brown - Saltman (Aust.) Proprietary Limited, The Block, 426 George Street, Sydney, N.S.W.

96,608. "Truepoint." Inks.—W. T. Distributors Proprietary Limited, 210-212 Queen Street, Melbourne, Victoria.

96,660. "Flight." Pencils.—Eagle Pencil Company, 703 East 13th Street, New York, U.S.A.

96,687. A label design of a drawing of a dragon.—Wrapping, printing, writing, transparent film wrapping, etc.—Clive Hughes & Company Limited, 17 Fleet Street, London, England.

88,028. "Thermit." A mixture of granulated aluminium and oxides of metals for producing a chemical reaction resulting in the production of superheated iron or steel.—Arthur Rudolf Granowski, Union House, 247 George Street, Sydney, N.S.W.

(Turn to page 68.)

METAL PRODUCTS MANUFACTURERS

Manufacturers of

THE FLA-SEAL OIL and GREASE RETAINER and an extensive
range of automotive replacement parts.

Also specialising in

Assembled steel and sheet metal products for the Engineering,
Motor, Aircraft and Building Industries.

A. FLAVELL PTY. LTD.

283 HODDLE STREET, COLLINGWOOD, N.9, VICTORIA. 'Phone: JA 4123.

THE EXPERIENCE OF THE WORLD plus AUSTRALIAN WORKMANSHIP

SHER

PORTABLE ELECTRIC TOOLS

Available from Engineers' Merchants throughout Australia



7in. **HEAVY DUTY POLISHERS**
and **SANDERS** for the Automotive
Industry for Polishing, Mopping,
Sanding, Wire-brushing and other
surface treatment.



Heavy Duty
BALL-BEARING
ELECTRIC DRILLS.
Available in sizes from 1/2in. to 1in.



HANDGRINDERS for Toolmakers with 2in. Grinding Wheel. For
Foundries and Manufacturers with 4in. Wheel.

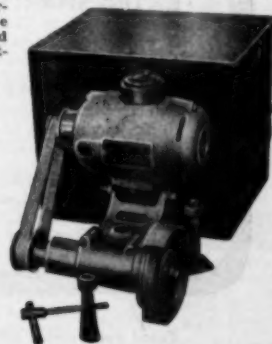


4in. **PRECISION TOOLPOST GRINDER**

A most versatile tool for production and toolroom.
The ball-bearings are
spring-loaded in the dust-
proof quill.

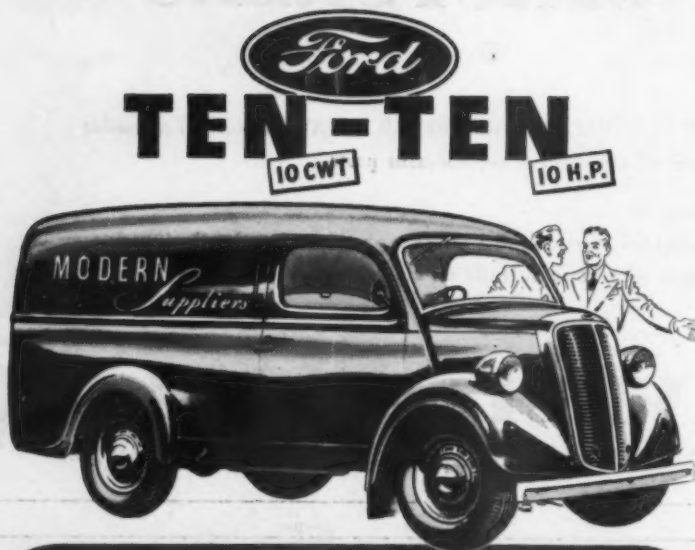
**DRILL
STANDS**

For quick con-
version of
Portable Elec-
tric Drills into
Drill Presses.



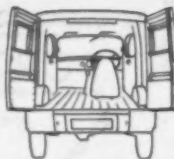
RED POINT TOOL CO. PTY. LTD., 66 ST. JOHN STREET, PRAHRAN, S.I., VICTORIA, AUSTRALIA

HERE'S THE BEST IN 10 CWT. DELIVERY VANS-



EXTRA LOAD-SPACE—120 USABLE CUBIC FEET.

Ford "Ten-Ten" will carry more-bulky, 10 cwt. loads than is possible with other vans of ordinary design. You can make more deliveries each trip . . . more trips each day, and so cut cost with Ford "Ten-Ten". Space-wasting bulkhead has been eliminated and driver may unload the Ford "Ten-Ten" from front or back.



EXTRA SMARTNESS. The smart lines and sparkling appearance of your new Ford "Ten-Ten" will bring new prestige to your business as well as saving you money. It's a van that's right in keeping with a smart modern business.

COMPLETE DEPENDABILITY. Ford "Ten-Ten's" sturdy commercial chassis, strongly-built body and economical Ford-engineered 10 h.p. motor gives you outstanding reliability. Semi-forward control simplifies parking, backing in and out of lanes, turning in narrow streets.

LOW PURCHASE PRICE. Your initial outlay in buying a Ford "Ten-Ten" is less. Registration and depreciation are less—Petrol consumption and maintenance are lower. Ford "Ten-Ten" not only costs less to buy—it costs less to run too!

Place your order with your local Ford Distributor or Dealer.

FORD MOTOR COMPANY OF AUSTRALIA PTY. LTD. (INC. IN VIC.), HOME BUSH, N.S.W.

(Continued from page 66.)

96,690. "Colcent." Degreasing preparations.—John Collier & Company Limited, Soap Works, Valley Road, Liversedge, York, England.

96,813. "Spred." Paints and enamels.—Glazebrooks (Australia) Proprietary Limited, corner of Williamstown Road and Smith Street, Port Melbourne, Victoria.

96,701. "Gro-Plus." Soil improvers and fertilizers.—Clark, King & Co. Pty. Limited, 216 Sussex Street, Sydney, N.S.W.

TENDERS FOR PATENTS

The Proprietors of the following Australian Patents:—

Patent No. 116,715, dated 3rd March, 1941, in the name of The Mantle Lamp Company of America, for an invention entitled "Water Heaters";

Patent No. 112,174, dated 19th January, 1939, in the name of The Mantle Lamp Company of America, for an invention entitled "Image Frequency Suppression System"; and

Patent No. 111,395, dated 1st December, 1938, in the name of The Mantle Lamp Company of America, for an invention entitled "Securing Tracking of Tuned Circuits";

Patent No. 114,707, dated 29th February, 1940, in the name of Victor S. Johnson, for an invention entitled "Scanning Radio Receivers";

Patent No. 114,706, dated 29th February, 1940, in the name of Victor S. Johnson, for an invention entitled "Radio Receivers"; and

Patent No. 118,477, dated 19th February, 1942, in the name of The Mantle Lamp Company of America, for an invention entitled "Liquid Fuel Burning Devices of Pressure Type";

Patent No. 108,481, dated 14th March, 1938, in the name of The Mantle Lamp Company of America, for an invention entitled "Brackets for Lamps and the Like";

Patent No. 114,682, dated 29th February, 1940, in the name of Victor S. Johnson, for an invention entitled "Adjustable Antenna Devices";

Patent No. 114,075, dated 29th February, 1940, in the name of Victor S. Johnson, for an invention entitled "Method and Apparatus for Radio Receiving";

Patent No. 114,715, dated 29th February, 1940, in the name of Victor S. Johnson, for an invention entitled "Remote Control Device Applicable for Example to the Adjustment of Variable-Length Radio Antennas";

Patent No. 114,236, dated 21st June, 1940, in the name of The Mantle Lamp Company of America, for an invention entitled "High Frequency Core Materials and Core and Process for Making said Materials"; and

Patent No. 116,308, dated 29th February, 1940, in the name of Victor S. Johnson, for an invention entitled "Tone Operated Relay for Scanning Radio Receivers";

GLOSCOAT

STRIPPABLE
HOT DIP PROTECTIVE
COATING



THIS
TOUGH,
MODERN,
TRANSPARENT
PACKAGING MEDIUM

provides an unrivalled rapid method for thoroughly protecting metal parts and the more simple assemblies against corrosion.

Reduces packing time by at least 60% in man-hours, an important consideration in these times, offering simultaneously completely adequate protection for the coated article against all forms of corrosion, damage or abrasion, mishandling, etc., during transit and storage even under extreme conditions.

GLOSCOAT gives excellent protection in all conditions likely to be encountered, particularly in hot, humid atmosphere or in extremes of cold. Furthermore, the coating can be easily removed by a simple stripping operation, revealing the components ready for immediate use, lubricated with a film of pure lubricating oil, automatically exuded from the plastic coating.

NOTE: The removed GLOSCOAT can be remelted repeatedly for further use.

METHOD OF APPLICATION: GLOSCOAT is applied by a simple dipping operation, using a special melting tank, as illustrated, to avoid local hotspots and overheating of the plastic.

A temperature of 180°C.-200°C. is recommended for coating purposes, working within these limits, the thickness of coat can be varied to suit individual requirements. For example, a thickness of .080in. is applied when the article is dipped at 190°C.

GLOSCOAT is thermoplastic and sets almost immediately after the component has been removed from the tank.

ADVANTAGES OVER OLD METHODS:

The light coloured transparent coating enhances the sales appeal of the coated article. For example, data engraved on gauges, tools, etc., encased in GLOSCOAT is visible to clients and articles can be handled freely without the danger of corrosion from the moisture of the fingers. Its high impact resistance gives protection against accidental damage through dropping.

- GLOSCOAT in one operation completely preserves and protects.
- GLOSCOAT is easy to apply and simple to remove.
- GLOSCOAT eliminates preservatives and desiccants.
- GLOSCOAT reduces bulk of packed articles, an important consideration if transmitted by air freight. Parts coated are ready for immediate use when received, as no degreasing is necessary.

British Optical Co. Pty. Ltd.
Wingello House, Angel Place, Sydney. Tel.: BL 1344.

Patent No. 112,584, dated 4th March, 1939, in the name of The Mantle Lamp Company of America, for an invention entitled "Chimneys for Liquid Fuel Burners";

Patent No. 106,177, dated 17th May, 1937, in the name of The Mantle Lamp Company of America, for an invention entitled "Improvements in or relating to Permeability Tuned Antenna Coupling Systems";

and
Patent No. 123,203, dated 8th December, 1943, in the name of Corning Glass Works, for an invention entitled "Photosensitive Gold Glass";

are prepared to dispose of the whole or part interest in the patents, or grant licenses on ROYALTY, and invite tenders in respect of same in order to fulfill the full requirements of the trade and the public.

Address enquiries to
**PHILLIPS, OLMONDE,
LePLASTRIER & NELSON,**
Fellows of the Institute of Patent Attorneys of Australia, Patent Attorneys, 37 Queen Street, Melbourne.

HIGH - PRESSURE COMPONENTS LIMITED, the proprietor of Australian Patent No. 133,440, for "Improvements in Pipe Couplings", invites enquiries from persons interested in manufacturing or using the patented invention in Australia under license or other arrangement.

Address enquiries to
A. WALLACE SMITH, Patent Attorney, 358 Collins Street, Melbourne.

JAMES EDWARD LOVE and HORACE DELBERT HUME, the proprietors of Australian Patent No. 124,658, for "Counterbalanced Frame for Agricultural Implements", invite enquiries from persons interested in manufacturing or using the patented invention in Australia under license or other arrangement.

Address enquiries to
A. WALLACE SMITH, Patent Attorney, 358 Collins Street, Melbourne.

W.A. CHAMBER'S JUBILEE.

In his presidential address to the jubilee annual meeting of the W.A. Chamber of Manufacturers on October 9th, Mr. Ernest Hearn took the opportunity to survey the progress of secondary industry in that State. For obvious reasons this progress had been beset with many obstacles and the manner in which many of them have been surmounted reflects credit upon local manufacturers who, in addition to shortages of basic materials and big consumer populations, have too often had to overcome local prejudice.

The first world war interrupted expansion in secondary industry which was only just recovering when the depression arrested further development. The second world war, however, found the State capable of making a contribution to the national effort, and local industry entered the post-war era with new techniques and skill which should see the post-war development continued. Nearly 19 per cent. of the State's



HOUSEHOLD AND INDUSTRIAL ADHESIVE

Supplied in 6-oz. tubes, pint, quart, gallon and 4-gallon tins

REPAIRS EVERYTHING

INTERSTATE AGENTS:

Miles and Insulating Supplies Co.
N.S.W., S.A., W.A., Q'land

Millen Bros., Launceston, Tas.
Reliance Trading Co., Hobart, Tas.

ORMISTON RUBBER CO.

Moorabool, Victoria

EXPORTERS — IMPORTERS GUTWIRTH & SONS PTY. LTD.

298 Collins Street
MELBOURNE, VICTORIA
Telephone: Cent. 4618

GARAGEMEN! DOOR LOCK *Springs* NOW AVAILABLE!

TO SUIT EVERY MAKE
OF CAR AND TRUCK

HENDERSON'S DOOR LOCK SPRINGS — made and guaranteed by a Company with over 55 years experience in making every type of spring — are standard equipment on most makes of cars, trucks and buses.

NOW! Packed in sturdy, handy size Kits of Assorted Sizes, for each range of models — ready for use in garage and service station . . . Just ask for Door Lock Spring Kit, No. 1, 2 or 3, for the make of unit the springs are required for.

KITS 1, 2 AND 3 — each contain 2 doz. Assorted Sizes to suit —

ALL FORD MODELS

ALL GENERAL MOTORS MODELS

ALL CHRYSLER, DODGE, PLYMOUTH, DE SOTO, WILLYS and RICHARDS BODIES

* SPRINGS FOR ALL OTHER TYPES OF LOCKS ALSO STOCKED.

* OBTAINABLE FROM ALL LEADING WHOLESALEERS THROUGHOUT AUSTRALIA

HENDERSON'S

FEDERAL SPRING WORKS LIMITED

(Incorporated in Victoria)
MELBOURNE HEAD OFFICE & WORKS, Alfred Street, North Melbourne, N. 19361
City Address: 82 Elizabeth Street, Melbourne, C.
SYDNEY: O'Rourke Street, Alexandria, N.S.W., M.K. 3445

Let us speed up your Wire and Strip
Forming on our Heenan & Froude
4 SLIDE PRESS

WIRE STRAIGHTENING, POINTING AND
BARREL NICKEL PLATING

BRADSHAW AUTOMATICS PTY. LTD.

147 CHAPEL STREET, ST. KILDA, S.2, VICTORIA

Telephones: LA 3226, (After Hours, U 9582), LA 4687.

Telegraphic Address: "BRADPINS."

Quicker & Better Finishing

Speed up your output with

GUNOL RAPID FINISHES

Every Colour, Matt and Glossy — Spraying or Brushing —
Stoving or Airdrying — Excellent Durability, Toughness and
Adhesion. LET US TELL YOU ABOUT IT.

DAVIS LACQUER PRODUCTS

31 NICHOLSON STREET, ABBOTSFORD, N.S. VIC.
Phone: JA 3761

population is engaged in manufacturing, a proportion which compares favourably with other States. But this position should not obscure the fact that, compared with South Australia, W.A. has not attracted new industries to the extent which might be expected, particularly as she has valuable coal deposits, and an equally good history of industrial peace.

There is no doubt that one reason for this position is the higher cost of electric power in Western Australia, for the history of industrialisation elsewhere has demonstrated the importance of competitive power costs. The State's comparative isolation, so far as basic materials in the shape of iron and steel supplies are concerned, has also probably contributed, and Mr. Hearn, when he expressed the hope that a local iron and steel industry would be started as a corollary to the establishment of new industries and a general quickening of industrial activity, was repeating the general feeling of manufacturers in that State.

The decision of the Commonwealth Government to maintain Australia's membership of the group of nations bound by the general agreement on tariffs and trade, had surprised and disturbed leaders of most phases of industry.

The conference on the subject now being held in England was dealing with moves to bring reductions in Australian tariffs on 596 items imported into this country. Leaders of industry, realising the vast strides Australian manufacturing had made over the relatively short span behind the shelter of tariffs, feared the consequence of any gaps being made. Industry felt that the Government should have taken its members into its confidence, for they wanted to know about this potential threat to their enterprises. The permanent abandonment of the right to decide economic policy contained too many hazards to be permitted, said Mr. Hearn.

WELDED JOINTS.

We have received a copy of the British Welding Research Association's publication: "Recommendations for the Standardisation of the Radiographic Examination of Welded Joints in Mild Steel Pressure Vessels."

This is a new issue in the Association's Technique and Memoranda series and has been reprinted from their journal "Welding Research."

The recommendations were prepared by the "F.E. 6 Committee of the B.W.R.A. on Radiography of Welded Pressure Vessels." The Committee have not attempted to prepare a manual of instruction in radiography for the novice, but to provide a direct practical lead towards a uniformly high standard of radiographic procedure in industry. Copies are available, price 1/6, plus postage.

LINSEED OILS of Guaranteed Quality

MEGGITT LTD
and **BLUNDELL SPENCE (A.S.)**
LINSEED OILS

Head Office: 67 YORK ST., SYDNEY.
Box 1666, G.P.O., Sydney.
Works: Parramatta, Melbourne, Adelaide.

FACTORY EQUIPMENT

"BURNER" Lathe Chucks
"MERCER" Dial and Cylinder
Gauges
"DING DONG" Hack saw
Blades
"MYFORD" Lathes
"COLEY" Thermometers

PAUL WITZIG & CO. PTY. LTD.
55 York Street, Sydney, N.S.W.
Telephone: BX 3147

SD SOLUBLE
SILICATES
of Soda Potash
True to Specification.

Silicate & Dolomite Co. of Aust.
Pty. Ltd. ALLEN STREET
PERMONT, N.S.W.

WELDON HARDWARE



Manufactured by

W. H. WELLS PTY. LTD.

127-135 Abbotford St., Nth. Mels.

Interstate Representatives:
N.S.W., Qld. & N.Z.: Esson R. Pict
Pty. Ltd., 222 Clarence St., Sydney.
South Australia: Wm. C. Keany, 141
Rundle St., Adelaide, Western Aus-
tralia: Associated Distributors, 690
Hay St., Perth.

HOBSON ENGINEERING CO

★ REPUTATION
SPECIALISTS ★

381 HENDERSON ROAD,
ALEXANDRIA, N.S.W.

Approved A.I.D. Inspectors,
Capstan and Auto Lathes
Work to 1 1/2 in. capacity,
Thread Rolling, Press Metal
Works, Sheet Metal Works,
Steel Fabrication, Oxy and
Electric Welding.

LA3414 LA1871

*Famed the
World over*

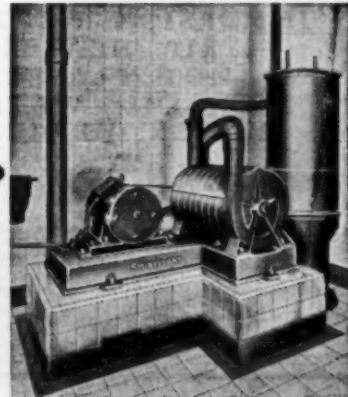
sturtevant

THE ORIGINAL BRITISH
TURBINE OPERATED
INDUSTRIAL CLEANERS

cut factory cleaning costs by 66%...

Following the recent installation of Sturtevant Turbine-Operated Industrial Cleaning equipment in a large Melbourne factory, cleaning costs dropped 66%. This is a typical Sturtevant achievement. Sturtevant's suction force and cleaning capacity is greater than that of other cleaners, yet operating costs are the lowest yet.

The three models illustrated are from the wide range which meets the needs of every cleaning job. Illustration 1 is a No. 5 Portable—for factories and stores. Illustration 2 is a No. 3 Portable which has several times the capacity of a house-cleaner, yet is light enough for a woman to use—suited to smaller factories, etc. Illustration No. 3 is a stationary Central Vacuum Cleaning Plant in a factory.



For full details and demonstrations
contact the Australian Distributor—

L. R. W. MOSS Pty Ltd

13 BANK PLACE, MELBOURNE. MU 334

Interstate Agents:

W.A.—Messrs. Wyper-Howard Ltd., Hay St., Perth.
N.S.W.—R. Dean Clarke Pty. Ltd., Australia Joinery,
38 Carrington St., Sydney.
S.A.—F. R. Mayfield Ltd., 225-7 Pirie St., Adelaide.

ACCEPTED TENDERS

COMMONWEALTH

DEPARTMENT OF SUPPLY.

Rags, Cleaning, Coloured (File No. C.4/250/77). Howletts Industries Pty. Ltd., £2,850.

Chairs, Dining Room (File No. C.4/168/84). P. Lewis, £1,425.

Basins, Earthenware (File No. C.4/175/172). Wm. Edwards & Co., £392/8/11.

Baskets, Steaming (File No. C.4/175/205). Premier Wire Works Pty. Ltd., £2,162/10/-.

Nutcrackers, Silverplated (File No. C.4/175/215). Stokes & Sons Pty. Ltd., £105.

Handies, Axe, Felling (File No. C.4/182/135). Thos. Mitchell & Co. Pty. Ltd., £425/2/6.

Rags, Cleaning (File No. C.4/250/77). Howletts Industries Pty. Ltd., £900.

Trousers, Battledress (File No. C.4/252/4). Reliance Manufacturing Co., £3,343/15/-.

Lids (File No. C.4/350/67). F. & V. Pressed Metal Co., £4,277/10/-.

Clips, Striker, Mortar (File No. C.4/350/69). Carr Fastener Co. of Aust. Ltd., £91/4/8.

Bolts, Nuts and Screws (File No. C.4/357/11). McPherson's Ltd., £207/16/5 and £229/0/6.

Bolts (File No. C.4/357/13). McPherson's Ltd., £1,548/9/-.

Ovens, Steam (File No. C.4/362/55). Galliers & Kieatt Pty. Ltd., £4,401/10/-; J. Curtin & Son, £5,880; Metters Ltd., £4,447/9/6.

Metal Folding Bedsteads (File No. C.4/366/122). William Latchford & Son, £650.

Aluminium Castings (File No. C.4/371/208). Commonwealth Aircraft Corporation Pty. Ltd., £120/9/6.

Black Steel Sheets and Galvanised Iron (File No. C.4/371/339). John Lysaght (Aust.) Pty. Ltd., £531/11/1.

Mild Steel Plates and Mild Steel Angles (File No. C.4/371/339). The Broken Hill Pty. Co. Ltd., £317/14/10.

Flat Black Mild Steel (File No. C.4/371/339). Bliss & Reels Pty. Ltd., £412/17/11.

Comsteel (File No. C.4/371/339). Commonwealth Steel Company Ltd., £265/16/2.

Jugs, Milk, Aluminium (File No. C.4/175/177). Crusader Plate Co. Pty. Ltd., £315.

Cups, Plates, Sauces, Basins and Dishes (File No. C.4/175/214). Moulded Products (Vic.) Pty. Ltd., £326/9/2.

Plates and Dishes (File No. C.4/175/214). Malbren Plastic Co., £110/18/9.

Transparent Cases (File No. C.4/177/58). H. Parsons Joinery Works Pty. Ltd., £2,028/10/-.

Transport Cases (File No. C.4/177/61). Carlson Bros., £690.

Cases, Wood Packing (File No. C.4/177/62). Strand Manufacturing & Agency Co., £331/5/-.

Cases, Wood Packing (File No. C.4/177/62). H. Parsons Joinery Works Pty. Ltd., £333/8/8.


Gloves, Boxing (File No. C.4/209/1). Nutting & Young Pty. Ltd., £541/8/1.

Mats, Gymnasium, Rubber (File No. C.4/209/2). S.A. Rubber Mills Ltd., £3,520.

Trousers, Drill, Khaki (File No. C.4/251/86). J. Smith & Sons, £2,354/13/9; A. Frost & Co., £3,984/7/6; Edward Fletcher, £5,755/4/2; The Downs Clothing Co., £5,312/10/-; M. Stern, £4,590; R. Lapidus, £3,202/10/-; J. Levy & Son, £1,859/7/6; Stanthorpe Clothing Co., £3,596/5/-; and Caledonian House Pty. Ltd., £5,847/7/11.


Trunks, Cabin, Aluminium, Alloy (File No. C.4/360/19). Altona Engineering Co., £59,062/10/-.

Trunks, Cabin, Aluminium, Alloy (File No. C.4/360/19). National Art Metal Co. Pty. Ltd., £132,624/7/6.



HEATING ELEMENTS

IMMERSION HEATERS
STRIP HEATERS
HOT PLATES
AIR, OIL, WATER
PLATEN HEATERS



GRIMWOOD ELECTRICAL PRODUCTS PTY. LTD.
ELECTRICAL HEATING ENGINEERS
Anderson Street, Botany, N.S.W. Telephone: FJ 1752.

Interstate: C. F. Willers, Brisbane, Q.; A. E. Ackland Pty. Ltd., Melbourne, Vic. and Tas.; Topp & Farmer, Adelaide, S.A.; Radio & Associated Industries, Perth, W.A.

METAL CUTTING



WOOD CUTTING

D. W. CUSTER PTY. LIMITED
235-239 CLARENCE STREET, SYDNEY
PHONE BX 5822
and at
MELBOURNE . ADELAIDE . BRISBANE . PERTH

Mashers, Potato (File No. C4/175/204). A. Jones & Co., £57/5/-.
Roman Catholic Ecclesiastical Equipment (File No. C4/251/71). T. Gaunt & Co. Pty. Ltd., £88.
Socks, Football, Maroon (File No. C4/255/33). H. W. Thompson, £81/1/2.

Socks, White (File No. C4/255/33). Interknit Hosiery Co., £121/1/4.
Voltage Stabiliser (File No. C4/316/134). Stabilac Pty. Ltd., £78.
Malthoid, 3-Ply (File No. C4/366/145). Pabco Products Pty. Ltd., £130/12/11.

Whaler and Dinghy (A/R No. 1484). Watts & Wright, and C. E. Crowley, £1,799.

Handles, Axe, Hoe, Hammer (A/R No. 1496). Hely Bros. Pty. Ltd., £541/13/4.

Cots, Wooden (A/R No. 1487). Dixie Cot Mfg., £1,923/15/-; Universal Woodworking Co., £1,440.

Forms, Dining Tent (A/R No. 1487). B. Hancox & Co., £3,720.

Tables, Portable (A/R No. 1487). B. Hancox & Co., £3,581/5/-.

Paint (A/R No. 1488). Lewis Berger & Sons (Aust.) Pty. Ltd., £1,034/13/2; Blundell Spence & Co. (Aust.) Pty. Ltd., £633/19/7; British Aust. Lead Mfg. Co. Pty. Ltd., £289/11/8.

Floor Polishers (A/R No. 1489). G. T. McOnie & Co., £361/10/8.

Squeegee Heads, 16 in. (A/R No. 1496). C. Jessop, £720.

Colanders, Frying Pans, Knives, Machines, Spoons, Strainers (A/R No. 1498). Rex Alum. Co. Pty. Ltd., £256/9/11; Sydney Importing Co. Ltd., £409/16/7.

16 m.m. Cinevox "Prefect" Sound-on-film Projectors (A/R No. 1504). Precision Engineering Co. Pty. Ltd., £744/2/4.

Dragnets (A/R No. 1506). J. & W. Stuart Ltd., £597/3/2.

Hi-Lift Hoist (A/R No. 1507). Consolidated Hi-Lift Hoists Pty. Ltd., £369/10/-.

X-Ray Unit (A/R No. 1508). Watson, Victor Ltd., £301/12/6.

Batteries (A/R No. 1513). Reliance Batteries Service Co., £271/11/8.

Fibro Cement Sheets, and Corrugated Sheets (A/R No. 1516).

Asbestos Products Pty. Ltd., £401/10/1.

Pipes (A/R No. 1518). Stone-ware Pipes Pty. Ltd., £524/16/8.

Parachloromethylol Antiseptic (A/R No. 1521). Rockitt & Coleman (Aust.) Ltd., £485.

Cans, Tea with Lids (A/R No. 1524). Nock & Kirby Ltd., £338/10/1.

Units, X-Ray (A/R No. 1529). Ultrays Pty. Ltd., £536/5/-.

Boxes, with (2) Jacks, for Telephone (A/R No. 1531). Plated Products, £397/5/-.

QUEENSLAND

BRISBANE CITY COUNCIL

Axle blanks, 4 1/2 in. dia. x 6 ft. 5 1/2 in. long, 100, £11/13/4 ea. Commonwealth Steel Co. Ltd.

Residual bitumen, 80/100, 400 tons, £20/5/- per ton. Shell Co. of Australia Ltd.

Laying and joining 4 in. asbestos cement, 4 in. c.i. and 6 in. asbestos cement pipes, £15,459.

Western Construction Co.
Copper tube, 2 in., o.d., 5,000 ft.; 1 1/2 in., o.d., 2,000 ft., £414. Stewarts & Lloyds Pty. Ltd.; 2 in., o.d., 5,000 ft., £273. C.O.N. Pty. Ltd.

(Turn to page 74.)

SPECIAL NOTICE TO READERS

To receive prompt attention, address all inquiries to Box 1487, G.P.O., Sydney.



POWER !

Whenever you want it

If power is your problem, we have the answer. The M.V. 2 1/2 and 3 h.p. Petrol and Petrol-Kerosene Engines are rugged, long-lasting units, which will solve your power worries economically and efficiently. They are single-cylinder, four-stroke engines, totally enclosed to protect all working parts from dust and grit. Available with either tank or hopper cooling.

● **M.V. 2 1/2 and 3 h.p. ENGINES**
PETROL and KEROSENE
The ideal industrial power units
Full particulars from
MOFFAT-VIRTUE LIMITED
Engineers, Manufacturers, Machinery Merchants
EPBOM ROAD, ROSEBERY, N.S.W. Phone: FF 1201 (9 lines).

**METAL SPINNERS
•
METAL STAMPERS
•
SHEET METAL
WORKERS
•
TOOL & DIE MAKERS**

Electric Galleries, Canopies, etc., Ball Finials, Shower Heads,
Flood Lights, E.P. Ware, Cadmium Platers, Chromium
Platers, Electro Platers, Nickel, Silver, Copper, Oxidising,
Electro Tinning, Brass Finishers, etc.

Holder Stroud Pty. Ltd.

Office and Works: Cnr. Bourke Road and Bowden Street,
ALEXANDRIA, N.S.W.
Phone: MX 2811



40/52.1

COMPLETE EXPORT-IMPORT SERVICE

You can investigate the prospects of your products for EXPORT through ONE organisation catering for all markets. At the same time this organisation can offer you the requirements you need in your production from outside Australia. This company covers the main commercial centres of the world through its own offices, with sub-agencies throughout their respective territories:

**THE EAST ASIATIC COMPANY
AUSTRALIA PTY. LTD.**

(Incorporated in N.S.W.)

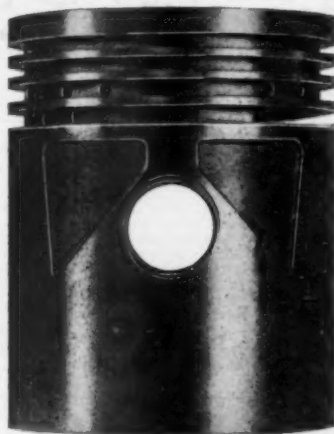
Endeavour House, 48 PITT ST., SYDNEY, N.S.W.

Telephones: BW 2036, 2037 and BU 3891. Telegrams: "Eastasia."

Western House, 23-29 WILLIAM ST., MELBOURNE, C.I. VIC.

Telephone Nos.: MB 1255 and MB 2213

Completely equipped offices in Bangkok, Bombay, Buenos Aires, Calcutta, Capetown, Dairen, Durban, Guatemala, Hankow, Harbin, Havana, Hongkong, Johannesburg, Karachi, Kuala Lumpur, London, Madras, Manila, Mexico City, Montreal, New Orleans, New York, Penang, Port Elizabeth, Rangoon, Saigon, San Francisco, San Salvador, Sao Paulo, Shanghai, Singapore, Tsingtau, Vancouver B.C., Waihaiwei.



**P
I
S
T
O
N**

**MANUFACTURERS AND
CYLINDER GRINDERS**

Central Motor Engineering Co. Pty. Ltd.
99 CROWN ST., SYDNEY. Tel.: MA 2538



VICTORY

Made for
25 Years

**WITH THIS
D.C. ARC WELDER
GENERATOR**

Build Your Own Portable Welding Plant
Sizes: 150-200-250-300-400-600 amps.

Welding Sets: Stationary, Trailer & Portable

BUY FROM Victoria, New South Wales, Tasmania:

CLAYTON-JOEL & CO.

JEFFCOTT STREET, MELBOURNE.

Phone: FJ 2234.

Telegrams: "VICWELD," Melbourne.

Western Australia: ATKINS, LTD., Hay Street, Perth.

Queensland: EVANS, DEAKIN & CO., Brisbane.

South Australia: POWER PLANT, LTD., 100 Currie Street, Adelaide.

Precision-built for accuracy



THE SIRIUS "MINOR" BUILDER'S LEVEL

Precision built for use by builders, architects and engineers, the Sirius "Minor" has accuracy of $\frac{1}{4}$ inch at 100ft. . . . screw focussing with glass diaphragm . . . magnification of X10.

Complete with polished case and rigid tripod.
£36, plus tax.

Horizontal circle reading to single degrees,
extra £2/10/-, plus tax.



E. ESDAILE & SONS PTY. LTD.
42, HUNTER ST. SYDNEY, BW 8631

SURVEYING, NAUTICAL INDUSTRIAL & OPTICAL INSTRUMENTS

(Continued from page 72.)

WEST AUSTRALIA

GOVERNMENT TENDER BOARD.

Vacuum solution feed chlorinator, "F.W.S." cap. 100 lbs. chlorine per 24 hours, £218. Western Machinery.

Panel mounting triple pole oil circuit breaker, 440 V, "O.J.N." type, J.B. 1512, £292. Noyes Bros. (Melb.) Ltd.

Pumps and motors, Item 1, £78 per unit; Item 2, £28/18/4; Item 4, £28/12/3 ea. McPherson's Ltd.; Item 2, £15/8/- ea. Harris, Scarfe & Sandovers; Item 6, £5/10/- ea; Item 5, £16/11/- ea. Flower, Davies & Johnson.

Elevator and conveyor belting, rates on application. Harris, Scarfe & Sandovers Ltd.

dry bulb method, and which can be used either in the hand or mounted on the wall, is now in production.

A simple built-in slide rule converts the wet bulb and dry bulb readings direct into relative humidity, eliminating charts or tables.

The new device consists of two etched scale glass thermometers individually hand-calibrated for accurate readings, secured in a white plastic case. The psychometric slide rule forms the cover of this case.

The "Pocket Humidicator", as it is known, is expected to have a wide field of application in heating, air conditioning, ventilating, refrigeration, industrial and chemical processing where the per cent. of atmosphere humidity is a factor. [2569].

POCKET INSTRUMENT MEASURES HUMIDITY

A precision pocket instrument, shorter than a pencil, that shows relative humidity by the wet-and-

BANK'S QUEENSLAND CENTENARY.

His Excellency Sir John Laverack, Governor of Queensland, unveiled on the 14th November, a commemoration tablet in the Brisbane Branch of the Bank of New South Wales, to

20 9 7 6 45 5a 40 40a 35 36 65

GM GM GM GM SIL SIL SIL SIL SIL GM
SIL SIL SIL SIL RG RG RG RG SIL
9ct. 9ct. 9ct. 9ct. 9ct.

ACTUAL SIZE

Austral CHAIN CO.

Manufacturers of Chain in all Metals

- PLATINUM
- WHITE GOLD
- YELLOW GOLD
- SILVER
- ROLLED GOLD
- GILDING METAL CHAIN

in GILT, NICKEL, or SILVER finish.
WIRE DRAWING TO ANY SIZE.

MELBOURNE ADDRESS:
88 KAY STREET, CARLTON
VICTORIA
Manager:
Miss M. E. WITTENBERG
Phone: FJ 5412

16 21

RG BRASS
BRASS

**STG. SILVER &
9 CARAT CHAIN
AVAILABLE FOR
IMMEDIATE
DELIVERY**

mark the centenary of the opening of the first Bank in Queensland. The Premier of Queensland and the Lord Mayor of Brisbane were also present.

On 14th November, 1850, Queensland's first bank opened its doors on the present site of the Brisbane office of the bank in the area then known as Moreton Bay. Items of historical interest were exhibited with the co-operation of the Historical Society of Queensland, Inc., whose president also

attended the unveiling ceremony and these included models of the original building.

The Bank of New South Wales has also published a booklet styled "Queensland's First Bank", and it is noteworthy that Moreton Bay (now Brisbane) was the first branch of any bank in Australia and its parent institution was the first bank in Australia.

From this single branch in 1850, the bank's branches and agencies have grown to 832 at present.

AUTOMATIC BAR WORK STEEL OR BRASS

Capacity Available $\frac{1}{4}$ to $\frac{3}{4}$ inches

PURVIS-GLOVER ENG. Pty. Ltd.

41 Moreland St. FOOTSCRAY
54 Hopkins St. VICTORIA

MW 2284

FOUNDRY FACINGS FOR IRON, STEEL AND BRASS FOUNDERS

PLUMBAGO
SILICA PAINT
WHITE FACING
HARD "ION" IRON

GRAPHITE
COAL DUST
BRICK DUST
CEMENT

BLACKING
BENTONITE
TERRA FLAKE
SHUAPART

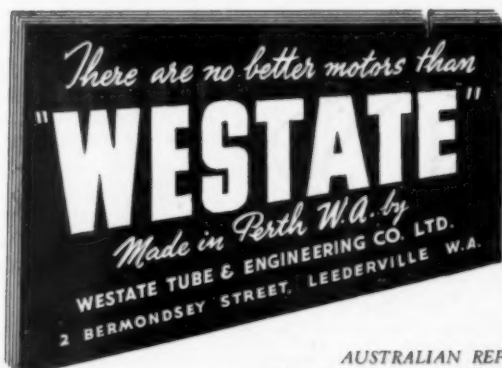
Manufactured by

Phone: MX 3160

PROUD BROS. PTY. LTD.

88 BEACONSFIELD ST., ALEXANDRIA, N.S.W. And at MELBOURNE, VIC.

Every feature of these "Westate" Electric Motors has been incorporated with the specific intention of ensuring maximum efficiency with maximum economy in operation, plus longest possible trouble-free life.



There are no better motors than
"WESTATE"
Made in Perth W.A. by
WESTATE TUBE & ENGINEERING CO. LTD.
2 BERMONDSEY STREET, LEEDERVILLE W.A.

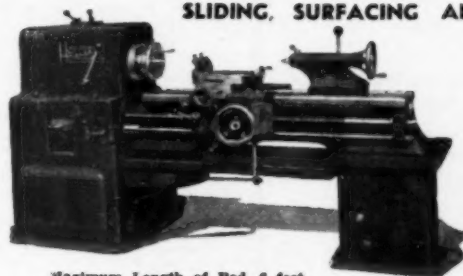
AUSTRALIAN REPRESENTATIVES:

N.S.W.: Bartram Hollingsworth, 79 Pitt Street, Sydney.
VIC.: J. R. McCarthy & Co., 430 Little Collins Street,
Melbourne.
S.A.: Radio Wholesalers Ltd., 24-26 James Place,
Adelaide.

QLD.: K. H. Dore, Hemdoff House, 171 Queen Street,
Brisbane.
TAS.: A. H. Gibson Electrical (Tasmania) Pty. Ltd.,
Hobart and Launceston.

"The HARRISON" 7" and 4½" Centre Lathes

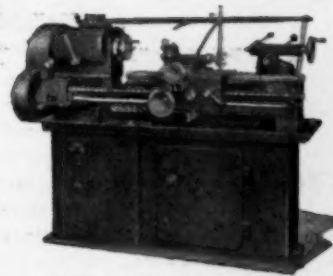
SLIDING, SURFACING AND SCREW-CUTTING



Maximum Length of Bed, 6 feet.

NOW
AVAILABLE
TO
AUSTRALIAN
INDUSTRY

•
IMMEDIATE
DELIVERY



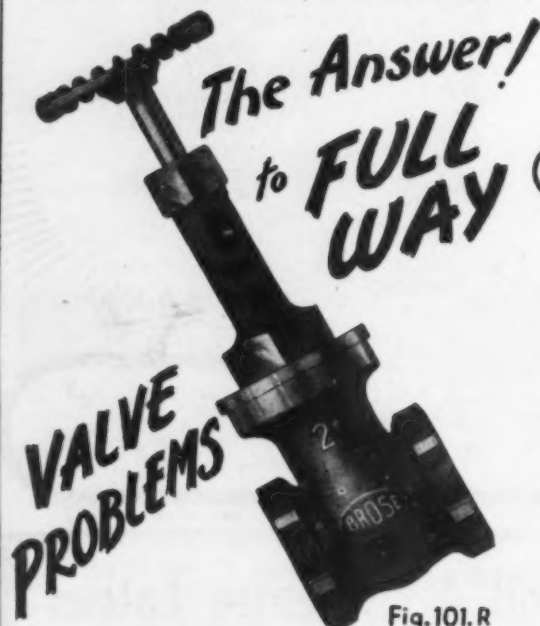
Maximum Length of Bed, 40 inches.

These modern geared head machines are supplied complete with electricals and special equipment, including taper turning attachments. Boring and milling tables can also be supplied with length of bed up to 6ft. between centres.

SELLING REPRESENTATIVES:

E. J. HEADLAND & CO., 197 King Street, Melbourne, Vic.
GOODALL & CO. PTY. LTD., 301-5 Kent Street, Sydney, N.S.W.

Announcement Of Particular Interest To PETROL AND OIL, GAS AND CHEMICAL COMPANIES



Brose Valves Limited, realising the need for a fullway-screwed gate valve with rising spindle, are able to advise that they can now supply a standard range in sizes 1in. to 4in.

The design of these valves is a new departure from the conventional type, has been subjected to the most rigid tests under extreme conditions and is particularly recommended for use in the control of PETROL, KEROSENE, OILS, GAS, and, in fact, all chemicals and liquids not injurious to copper alloys.

These valves are available for early delivery in two specifications:

- (i) 101R.—Suitable for working pressures: Hydraulic up to 150 lbs. per sq. inch.
- (ii) 101RX.—Suitable for working pressures: Hydraulic up to 300 lbs. per sq. inch.

Fig. 101.R

FEATURES INCLUDE:

- ★ Instant and complete shut-off with easy control.
- ★ Gate discs which are simply replaced or renewed and which can be supplied in nickel alloy, stainless steel, monel metal, etc., if considered necessary.
- ★ New design hexagons with sturdy flat-faced, V-shaped lugs which permit firm fit and grip of open-end pipe wrench without disfiguring casting.
- ★ Interchangeable replacement spares available ex stock.
- ★ Are of strong and rugged construction. Designed and built to outlast normal life of the ordinary standard type valve in the most severe industrial applications.

For Full Particulars and Literature, write

BROSE VALVES LIMITED

LIDCOMBE, N.S.W.

OR THEIR AGENTS IN ALL STATES

VICTORIA:
WESTON R. FOX PTY. LTD.
364 Lonsdale Street
Melbourne

SOUTH & WEST AUSTRALIA: QUEENSLAND:
MARSHALL AGENCIES GRADWELL BROS.
146 Gawler Place 99-101 Edward Street
Adelaide Brisbane

NEW ZEALAND:
FOX & GUNN LTD.
54 Customs Street East
Auckland

MERCHANTS IN ALL STATES ARE STOCKISTS OF BROSE VALVES

Current Tenders

(Continued from page 89.)

STATE STORES BOARD

Structural Steel, etc. Dec. 18.

MISCELLANEOUS.

Corrugated Protected Metal Sheet (Sch. 200/50). Dec. 4.

Fabricated Structural Steel Towers (Spec. 197/50), for Townsville Regional Electricity Board. Dec. 4.

Latticed Steel Towers (2), for 66kV, Fitzroy River Crossing, for Capricornia Regional Board. Nov. 28.

Plan Printing Machines, for Cairns Regional Electricity Board (Con. L50/21). Jan. 23.

Quarry Plant, for City of Ipswich. Dec. 1.

Switchgear, Relays and Instruments, for Cairns Regional Electricity Board. Dec. 8.

Switchgear, 22,000 and 6,600 volt, for Cairns Regional Electricity Board (Con. L50/20). Dec. 13.

WEST AUSTRALIA

GOVERNMENT TENDER BOARD.

Automatic Telephone Exchange (Sch. 529A). Dec. 14.

Cast Manganese Steel Railway Crossings. Dec. 21.

Fishplates, for the Railways (Sch. 608a). Dec. 21.

Mobile Crane, Wheel Mounted. Dec. 14.

Railway Wagon Equipment. Dec. 7.

Steam Raising Plant, for Colliery Power Station. Dec. 14.

Transformers—600 KVA and 750 KVA (Sch. 544a). Dec. 7.

Telephone Exchange, automatic. Dec. 14.

Wheel Mounted Mobile Crane (Sch. 527A). Dec. 14.

NEW ZEALAND

HYDRO ELECTRIC DEPARTMENT.

Auxiliary generating sets, 625 kVA., two (Con. 169). Pars. also Auckland, Christchurch, London, Paris, Washington, and Montreal. March 13.

Filtration Plant at Tauranga Borough Council. Nov. 23.

Outdoor Switchgear and Steelwork, 50 kV (Con. 160). Nov. 28.

Switchgear and steelwork, 110 kV. (Con. 167, 168). Specs. also Auckland, Christchurch. March 6.

MINISTRY OF WORKS.

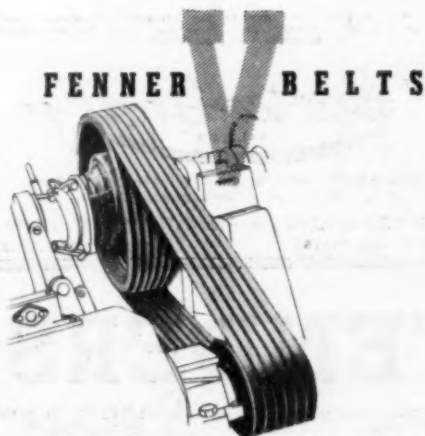
Cableways, radial, span 1,200 ft., continuous load 7½ tons, for accurate placing of concrete, etc., Whakamaru, two. Nov. 25.

Double drum steam winch; 5-ton single acting steam piling hammer; steam boiler; 3 in. metallic steam hose. Pars. also Auckland, Christchurch, Dunedin. Dec. 5.

MISCELLANEOUS.

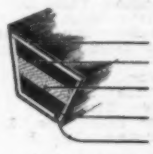
Filtration Plant (Con. 124). Nov. 28.

NO WASTED POWER WITH *tough*



Individually vulcanised in precision V-moulds to ensure accuracy of width, thickness, included angle and length, *each Fenner V-Belt is actually engineered to fit the sheave*, to grip without excess friction and loss of drive efficiency.

Complete range of sizes and sections for standard and FHP drives in cord, rayon or steel cable; also special Static, Heat and Oil resistant types.



- ★ Sliced-cut, rubber impregnated Outer Cover.
- ★ Top Rubber and fabric rubber compounded for repeated flexings.
- ★ Small diameter Lead Carrying Cards at and above pitch line.
- ★ Tough, heat-resisting Bottom Rubber.
- ★ Reinforcing Inner Cover.

Agents for Australia:

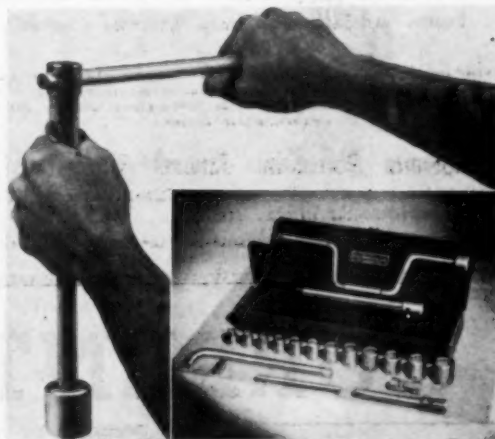
N.S.W.: AUSTRAL ENGINEERING
SUPPLIES PTY. LTD.
490 Kent Street, Sydney

VIC.: A.E. SUPPLIES PTY. LTD.
431 High Street, Prahran, S.I.

QLD.: BRITISH GENERAL ELECTRIC
CO. PTY. LTD.
371-373 Adelaide Street, Brisbane

STH. AUST. & WEST AUST.:
THOMAS & WALL LTD.
86 Pirie Street, Adelaide

for those TOUGH JOBS



Make it easy
with

AUSTALOY TOOLS

Heavy duty jobs need heavy duty tools. Austaloy Socket sets — manufactured from highest grade steel — will make those difficult jobs much easier. They come to you in a tool case of heavy gauge steel with provision for locking. Austaloy Socket sets are available in a variety of different sizes for S.A.E., Whitworth and B.S.F.

Illustrated is the S.A.E. set No. 3, which includes 12 sockets — from $\frac{1}{2}$ in. to 1 $\frac{1}{2}$ in. — Connector, Universal Joint, 6in. extension, 10in. extension, tommy-bar, offset handle and braces. Other sets with different combinations of sockets, etc., are also available.


A.G. HEALING LTD.
MELBOURNE • SYDNEY • ADELAIDE • BRISBANE

APEMCO

PORCELAIN ENAMELS

The APEMCO Range includes a Type of Porcelain Enamel for Each and Every Industrial Purpose

ALSO

Acid-resisting Enamels for Bath Tubs (Dry Process). Liquid Cast Iron Enamel for Stoves. Leadless or Lead Containing for use with or without undercoat, and Sheet Iron Enamels for Refrigerators and Flat Work. Acid-resisting or Ordinary.

Apemco Porcelain Enamel Specialists

Fakington St., St. Kilda, Vic. Point Nepean Rd., Nth. Brighton, Vic.
Telephones: LA 1008, XB 3695, U 7830.

Cable & Telegraphic Address: "APEMCO," Melbourne.

MECHANICAL SORTING EQUIPMENT

Wholly Made in Australia in Sizes to Suit Either the Smallest or the Largest Office.

FAST, ACCURATE AND SAFE!

Is Simple, Inexpensive, Eliminates Drudgery and Releases Time for Important Work

Fastest office system ever devised for arranging documents, letters, records, etc., in any desired order. More than 2,700 Systems operating in Australia with complete success.

The Sorter-Graf Co.
C. BLAKE

Manufacturers and Suppliers of Sorter-Graf Systems and Equipment. Demonstrations Free.

WARWICK BUILDING, 15 HAMILTON STREET, SYDNEY
AGENTS IN ALL STATES. Tel.: BW 7332.

CURRENT TENDERS

NEW TENDERS

The following tenders have been called since our last issue. Current tenders which have been published in previous issues follow this section.

COMMONWEALTH

AUSTRALIAN ALUMINIUM PRODUCTION COMMISSION.

Cold Cutting Saw, for Aluminium Billets, and Saw Sharpener (Spec. M.32). Jan. 15
Fans (16), 50,000 cub. ft. per minute (Sch. M.53). Jan. 15.
Master Clock Time System, with Attendance Recorders and Wall Clocks (Spec. E.31). Dec. 18.

POSTMASTER-GENERAL'S DEPARTMENT.

Copper Tapes (Sch. C.6467). Dec. 14.

Printed Forms, Coating Series (Sch. C.6472). Dec. 7.
Road Ploughs (Sch. V.425). Dec. 5.

DEPARTMENT OF CIVIL AVIATION.

Airport Rotating Light Beacons (Sch. 307). Extended to Dec. 12.
Dual Diversity Communication Receivers (Sch. 318). Dec. 19.
Fuses, for Radio and Radar Equipment (Sch. 310). Jan. 16.
Hand Tools, for Adjusting Telephone Equipment (Sch. 317). Jan. 16.
High Intensity Approach Light Fittings (Sch. 308). Dec. 12.
Toroidal Coil Winding Machine (Sch. 319). Dec. 5.

DEPARTMENT OF WORKS AND HOUSING.

Gyratory Type Fine Reduction Stone Crushing Machine, for Canberra. Dec. 12.
Dust Extraction Ductwork, for Heidelberg. Dec. 19.

High Tension Underground Cable and Joint Boxes, for Canberra. Jan. 8.

Low Tension Ironclad Switchboards, for Canberra. Jan. 9.

Low Tension Underground Cable and Joint Boxes, for Canberra. Jan. 9.

Metal Lathes, 4½ in. (2) and Accessories, for Canberra High School. Dec. 12.

Pneumatic Tyred Rollers (3), 20-40 ton, for various States. Dec. 12.

Steel Door Frames and Aluminium Doors, Supply and fit, for Administrative Offices Building, Canberra. Dec. 12.

STORES, SUPPLY AND TENDER BOARD.

Postage Stamp Paper (Sch. C.T.B. 927). Jan. 18.
Telegram Envelopes (Sch. C.T.B. 926). Dec. 7.

GOVERNMENT RAILWAYS DEPARTMENT.
Fuel Oil. Dec. 8.

NEW SOUTH WALES

DEPARTMENT OF PUBLIC WORKS.

Copper Sheet. Dec. 8.
Current Transformers. Dec. 1.
Electrically - driven Borehole Type Pumping Plant, for Coonamble Water Supply. Jan. 15.
Electrically - driven Pumping Plant, for Dorrigo Water Supply. Jan. 29.
Excavators. Dec. 8.
Food Trolley. Dec. 6.
Gas Fire. Dec. 1.
Hacksaw Blades. Dec. 13.
Jackhammers. Dec. 13.

(Turn to page 79.)

NICHROME

RESISTANCE WIRE

THE WORLD'S BEST

Made in England

SOLE AUSTRALIAN AGENTS:

WARMAN & DOUGLAS

51 FLINDERS LANE, MELBOURNE.

Phone: JM 1568.

"CHALLENGE" OILERS



BRASS NICKEL PLATED IN THE FOLLOWING SIZES:

$\frac{1}{8}$ in., $\frac{1}{4}$ in., $\frac{3}{8}$ in., $\frac{1}{2}$ in. and $\frac{3}{4}$ in.

AUSTRAL METAL PRESSING PTY. LTD.
970-972 LIVERPOOL ROAD, BANKSTOWN EAST, N.S.W.

Telephones: UY 1075, UY 1264, UY 1265.

"BLUE BOOK" OF INDUSTRY

Copies of New Issue
NOW READY

- (1) List of Manufacturers.
- (2) Articles made in Australia and Names of Makers.
- (3) Trade Marks and Brands.

1,184 PAGES

Price: £2/12/6 Copy

ORDER NOW!

NEW TENDERS - Contd.

- Portable Air Compressors. Dec. 11.
Power Hacksaw, Bandsaw, Finisher Table. Dec. 13.
Steam Heated Coppers. Dec. 6.
Steam Heated Sterilizers. Dec. 6.

DEPARTMENT OF MAIN ROADS.

- Bolts and Nuts. Nov. 30.
Local or Imported Grader Blade Steel. Nov. 30.
Nuts and Washers. Nov. 30.

DEPARTMENT OF SUPPLY.

- Crimse-resisting Grey Linen Cloth. Dec. 5.
Scales and Weighing Appliances. Dec. 5.

♦ ♦ SEE ALSO ♦ ♦
"LATE OPEN TENDERS"

METROPOLITAN WATER, SEWERAGE AND DRAINAGE BOARD.

- Rubber Jointing Rings, approx. 2,000 4 in. and 750 6 in., for Leichhardt (Quot. 8293). Nov. 27.

STATE CONTRACTS BOARD.

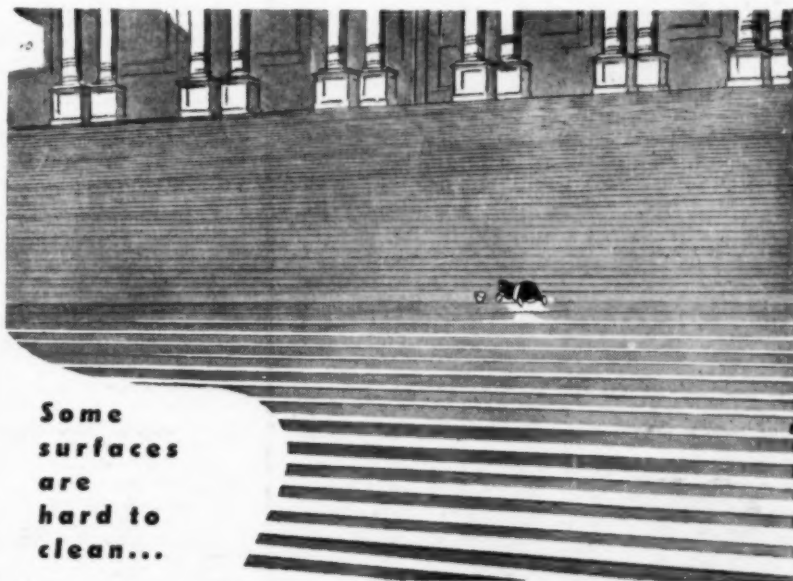
- Accounting Machines. Nov. 30.
Dielectric and Induction Heaters. Dec. 8.
Electric Typewriter Accounting Machines. Dec. 1.
Motor Generator Sets. Dec. 5.
Shop Counter-type Refrigerator, Purchase and removal. Nov. 30.
Sign Plates. Nov. 30.

SYDNEY CITY COUNCIL.

- Pneumatic Tyres and Tubes, for 6 monthly period, ending 30th June, 1951. Dec. 6.

SYDNEY COUNTY COUNCIL.

- Miscellaneous Galleries, fuel oil heaters, lifting beam, etc., for Velox Boiler House, Bunnerong Power Station. Nov. 28.
Miscellaneous Mild Steel Welded Tanks, for Nos. 20 and 21 units at



Some
surfaces
are
hard to
clean...

—but metal surfaces are easily degreased

by I.C.I. methods. If you have a metal degreasing

problem, consult us—we will solve it for you. Modern methods of

production need modern degreasing practice.

—CONTACT YOUR NEAREST STATE OFFICE FOR PROMPT,
COMPLETE INFORMATION.

I.C.I. TRICHLORETHYLENE METAL DEGREASING

IMPERIAL CHEMICAL INDUSTRIES OF AUSTRALIA & NEW ZEALAND LTD.

380 COLLINS STREET, MELBOURNE
151 GEORGE ST., SYDNEY — 293 QUEEN ST., BRISBANE
I.C.I. (N.Z.) LTD., AUCKLAND AND WELLINGTON, NEW ZEALAND

Agents: Elder, Smith & Co. Ltd., South Aust. and Western Aust.; Chemical & Textile Agencies Pty. Ltd., Tasmania



Pymont "B" Power Station
(Spec. 1491). Dec. 14.

MISCELLANEOUS.

- Tracked Tractor, 40 h.p.; Front or Overhead Loader Attachment; Dozer Blade Attachment, for City of Tamworth. Dec. 12.

VICTORIA

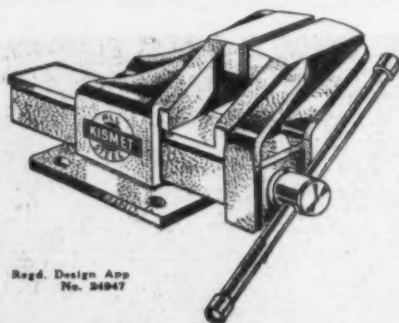
GOVERNMENT RAILWAYS DEPARTMENT.

- Bench Type Drilling Machine. Dec. 6.
Engine-driven Electric Welding Outfit. Dec. 12.

- High Voltage Test Set. Dec. 13.
Knife Switches. Dec. 6.
Positive Plates. Dec. 6.

DEPARTMENT OF PUBLIC WORKS.

- Briquette Hot-water Service, for Yarra Glen. Nov. 28.
(Turn to page 80.)



Regd. Design App
No. 24947

The "KISMET" FULLY OFFSET VICE

Specially Manufactured for Ultra-Convenience . . .

The latest addition to the Kismet range is this ultra-convenient vice with fully offset jaws. Only KISMET all-steel vices will stand all stresses and strains of rough and rugged work. They do not snap or break as cast vices. Spring loaded spindle to eliminate backlash; specially designed nickel bronze nut to take side and end thrust. (Reg. Design No. 24,190.) Size: 4in., 5in., and 6in. jaws.

AVAILABLE FROM WHOLESALE HOUSES

Factory Representatives: WHITE and PETRIE, 65 Elizabeth St., Brisbane; White and Petrie, Sydney; Weston, R. Fox & Co. Pty., Ltd., Melbourne; Arthur H. Hall, Adelaide; A. Parkinson & Co., Perth; Howard Vaughan Pty., Ltd., Wellington. Export Enquiries: White and Petrie.

MANUFACTURED BY

KISMET ENGINEERING WORKS
BRISBANE

Crest



THIS IS YOUR GUARANTEE OF
UNSURPASSED QUALITY AND
UNIFORMITY.

Zinc Oxide

Manufactured in Australia by

Crest Chemical Company Pty. Ltd.

PERRY ST., MATRAVILLE, N.S.W.

Telephone FJ 2493.

NEW TENDERS - Contd.

Electric Hot-water Service, for Greensborough. Dec. 12.
Electric Refrigerator, for Leon-gatha. Nov. 28.
Fuel Hot-water Service, for Armadale. Nov. 28.
Fuel Hot-water Service, for Balook. Nov. 28.
Hot-water Services (3), for Research Station, Rutherglen. Nov. 28.
Kerosene Hot-water Service, for Huntbridge. Nov. 28.

DEPARTMENT OF SUPPLY.

Light Grey Paint. Nov. 28.
Machine Tools, Purchase of. Dec. 7.
Projectors. Nov. 28.
Radio Plant and Equipment. Dec. 18.

MELBOURNE AND METRO-POLITAN TRAMWAYS BOARD.

Portable Concrete Mixer (Tender 1609). Dec. 18.

STATE RIVERS AND WATER SUPPLY COMMISSION.

Lathe, 6-in., with electric motor drive. Dec. 12.

STATE ELECTRICITY COMMISSION.

Automatic Telephone Instruments (Spec. 50-51/176). Jan. 24.
Copper Conductors, Jointing Sleeves and Trolley Wire (Spec. 50-51/177). Dec. 13.
Metal-clad Switchgear and Accessories, 20 K.V., 25-cycle (Spec. 50-51/100). Extended to Dec. 6.
Plate Girder Bridges. Extended to Dec. 13.
Switchgear and Accessories, 6,000-V. (Spec. 50-51/180). Feb. 14.
Toroidal Iron Dust Cores (Spec. 50-51/175). Jan. 24.

MISCELLANEOUS.

Crawler Tractor, 30-40 h.p.; Power Grader, 1, 2, or 3 yard scoop, on Rubber Wheels; Caravan, suitable road work; Tents, for Shire of Huntly. Dec. 11.
Medium-weight Power Grader, for Shire of Benalla. Dec. 8.
Power Grader of approx. 35-h.p., for City of Nunawading. Dec. 11.
Power-operated Road Grader, for Shire of Omeo. Dec. 2.

QUEENSLAND

BRISBANE CITY COUNCIL.

Air Brake Equipment, for 50 drop centre tramcars. Dec. 1.
All-metal Single-deck Bodies (30), for Diesel bus chassis. Dec. 8.
Electrical Potentiometer; Four-point portable temperature recorder. Jan. 17.

DEPARTMENT OF PUBLIC WORKS.

Crane, 15 ton, hand-operated. Dec. 16.
Steel Frame Windows to Administrative Building, Charters Towers. Dec. 6.

(Turn to page 82.)

The Finest House in
Australia for
Engravings of Every
Description

The Randle
Photo Engraving Co.

PTY. LTD.

Photo. Engravers, Stereotypers,
and Designers

RANDLE HOUSE,
73 FLINDERS STREET,
DARLINGHURST, N.S.W.

Phones: FA 3133-9

L. T. KENNETT
Improved Patent, 16035
LADDERS

for
BUILDERS,
PAINTERS,
and
HOME
USE,
also
STEPS,
TRESTLES,
GARDEN
SEATS,
HAND
TRUCKS.

Illustrated
Booklet
Free on
Request.



L. T. KENNETT LADDERS
PTY. LTD.

26, 27, 28 CITY ROAD
DARLINGTON, SYDNEY

Est'd. 50 Years. Tel.: MX 3974.

Manufacturing Engineers

Automatic and Capstan
Turning, Milling, Drilling,
Cutter Grinding

GENERAL MACHINING
AND ASSEMBLY

W. B. STEEN
PTY. LTD.

129 Palmer St., Richmond, Vic.

'Phone: JA 6700

For Precision and Service

IT TAKES THE STRESSES IN ALL DIRECTIONS

BECAUSE

It's Corded!

WAREHOUSES, FACTORIES, WHOLESALE AND RETAIL STORES
ALL NEED THESE WHEELS



Now is the time to install "Kenworth" HEAVY DUTY Industrial Wheels which cannot damage your floors. The reason is that "Kenworth" Industrial Wheels are built up from highest quality resilient rubber that cushions the load. Yet, resilient as they are, "Kenworth" wheels cannot lose their shape under the heaviest loads because they are generously reinforced with motor tyre cords. This is your assurance of lasting service.

HEAVY DUTY WHEELS:

		Tested to Carry	
		Per Wheel	
3 1/2" x 1 1/2" x 1/2" bore	..	65 lbs.	
5" x 1 1/2" x 1/2"	..	125 "	
5" x 2" x 1"	..	225 "	
6" x 1 1/2" x 1/2"	..	200 "	
6" x 2" x 1"	..	330 "	
7" x 2" x 1"	..	480 "	
8" x 1 1/2" x 1/2"	..	220 "	
8" x 2" x 1"	..	640 "	
10" x 2" x 1"	..	1,000 "	
12" x 2" x 1"	..	1,200 "	

ROLLER BEARING TYPE:

8" x 2" x 1"	..	640 "	
--------------	----	-------	--

IF IT'S BRANDED
KENWORTH
IT'S A GENUINE
CORDED
WHEEL

KENWORTH RUBBER LIMITED

181 LENNOX STREET, RICHMOND, VIC.

154a ALBION STREET, SYDNEY



"Angus" GACO

M. I. (METAL INSERT)

OIL SEALS

SUPERSEDING
METAL CASED SEALS

The outer surface of Gaco material instead of metal
provides a perfect fluid tight fit in the housing.

GARDNER WAERN & CO. PTY. LTD.

481 FLINDERS ST., MELBOURNE.

'Phone: ★MU 9451

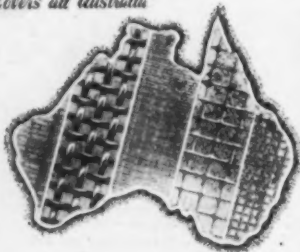
45 WATT ST., NEWCASTLE.

'Phone: ★B 1587

208 CLARENCE ST., SYDNEY.

'Phone: ★MA 9134

"Covers all Australia"



WOVEN Wire Gauge

of every description
manufactured in steel,
galvanised, brass,
copper, monel, tinned,
bronze, stainless steel,
silver.

For Mining Screens, Quarries, Harvesters, Grading Metal,
Barley, Malt, Flour, Petrol.

WIRE WORK OF EVERY DESCRIPTION

Such as Baskets for Annealing, Heat Treatment, Plating
and all types used in manufacturing Oven Racks, Grillar
Grids, Ice Chest and Refrigerator Trays — Hooley Machine
Belts, "Melwire" Ties.

TUBE AND PIPE WORK

Guards for Windows and Machinery, Chain Link Netting
for Tennis Courts, Fencing, Partitions and Industrial Hand
Trolleys. Conveyor Belts in all metals for all manufacturing
purposes.

MELBOURNE WIRE WORKS

85-89 CREMORNE STREET RICHMOND VICTORIA

EST. 1852

'Phone: JB 2841 (8 lines)

Telegrams and Cables: "Melwirworks"

>W & G< CELLULOID PROTRACTORS

MADE IN AUSTRALIA—
EXPORTED THROUGHOUT THE WORLD

*Manufactured from heavy gauge transparent
celluloid, in a large range of sizes in both
circular and semi-circular types. Accurately
engraved and filled with special enamels for
greater durability.*

AVAILABLE AT ALL DRAWING OFFICE SUPPLIERS

Also manufactured by >W & G< Melbourne, Australia
are a wide range of
"DUALFACE" SLIDE RULES — DRAWING SCALES



Torsion

SPRINGS OF ALL TYPES & SIZES
AUTOMATIC PRODUCTION

WHITELAW SPRINGS PTY. LTD.

562 SPENCER ST., MELBOURNE, PHONE: FJ1135

NEW TENDERS — Contd.

STATE ELECTRICITY COM- MISSION.

Oil Circuit-Breakers, 66kV, for
Sub-Stations (Spec. 218). Feb. 21.

MISCELLANEOUS.

Corrugated Protected Metal
Sheeting, for Townsville Regional
Electricity Board (Sch. 200/50).
Dec. 4.

Pipe, r.c., 42 in. dia., 1,326 ft.;
36 in. dia., 284 ft.; 30 in. dia., 64 ft.,
for Toowoomba City Council. Dec.
1.

SOUTH AUSTRALIA

SUPPLY AND TENDER BOARD.

Crane, electric overhead travel-
ling, 25 ton, with 5 ton auxiliary
hoist. Dec. 11.

Pipe, c.l. spun, 27,000 tons.
Dec. 18.

Steel Loco, Axles. Dec. 4.
Structural and Plate Drilling
Machine. Dec. 4.

WEST AUSTRALIA

GOVERNMENT TENDER BOARD.

Sluice Valves (Sch. 582A). Dec.
21.

NEW ZEALAND

MINISTRY OF WORKS

Radial Spillway Gates (4),
approx. 20 ft. high by 17 ft. wide,
of fabricated steel. Jan. 16.

CURRENT TENDERS

The following tenders have
appeared in previous issues
and are still current.

COMMONWEALTH

POSTMASTER-GENERAL'S DEPARTMENT.

B.P.O. Standard Unisector
Maintenance Parts (Sch. C.6426).
Jan. 16.

Bedding (Sch. V.424). Dec. 5.
Bimotional Switch Wiper

Assemblies and Parts (Sch. C-
6436). Dec. 19.

Broadcasting Transmitters, Ra-
dio Telephone (Sch. C.6435). Dec.
14.

Coil Winding Wire (Sch. C-
6531). Dec. 19.

Communication System between
Sydney and Melbourne (Spec. C-
6157). Extended to Jan. 18, 1951.

Door Checks (Sch. C.6466). Dec.
5.

Dry Cells and Batteries (Sch.
C.6465). Nov. 30.

Electrical Indicating Meters
(Sch. C.6421). Dec. 12.

High Frequency Radio Tele-
phone Subscribers' Equipment
(Sch. C.6435). Dec. 14.

Lead Seals (Sch. C.6460). Nov.
30.

Machine Telegraph Equipment
(Sch. C.6446). Dec. 5.

Mechanics' Tools (Pliers and
Screwdrivers), (Sch. C.6418). Nov.
30.

Pliers and Screwdrivers (Sch.
C.6418). Nov. 30.

Protective Apparatus (Sch. C-
6462). Jan. 23.

Relay Strips and Mountings
(Sch. C.6419). Dec. 7.

Relay Sets, Two Party Sub-
scribers' (Sch. C.6463). Dec. 5.

Receivers and Parts (Sch. C-
6296). Dec. 5.

Resistors and Reactances (Sch.
C.6437). Dec. 19.

Spanners (Sch. C.6434). Dec. 19.

Sub-Station Accessories (Sch. C-
6420). Dec. 7.

Submarine Telephone Cable
(Sch. C.6468). Jan. 18.

Switches (Sch. C.6464). Nov.
28.

Teleprinter Table and Silence
Covers (Sch. C.6439). Nov. 28.

Tools-Adjusters and Benders
(Sch. C.6429). Dec. 14.

Telephone Components (Sch. C-
6442). Dec. 5.

Tools, for Mechanics, Exchange
and Sub-station Maintenance
(Sch. C.6416). Nov. 30.

Valves and Sockets (Second-
hand), (Sch. V.423). Nov. 28.

DEPARTMENT OF CIVIL AVIATION.

Master Time Clock Systems and
Associated Slave Equipment. Jan.
30.

Tubular Steel Masts or Com-
ponent Parts, for Rhombic Aerials
(Sch. 314). Nov. 28.

AUSTRALIAN ALUMINIUM PRODUCTION COMMISSION.

Air Compressors (2), 600
C.F.M. (Spec. M29). Dec. 11.
(Turn to page 83.)

BRASS RODS & TUBES

We carry a comprehensive range of brass rods and tubes in all sizes and will value your enquiries.

WRIGHT AND COMPANY

For Better Metal Service

81 CLARENCE STREET, SYDNEY

Phone: BX 1211 (5 lines)

Works Managers — Plant Engineers

It might be "HOT AIR," but it could happen to you!

You cannot AFFORD to be without the total capacity your air compressors are capable of delivering, so . . .

IF your compressors are in need of a complete overhaul,
IF you need an additional air supply to meet a special production job,
IF you require extra air at annual or periodic maintenance shutdowns,
IF you propose to demolish or alter concrete foundations,
IF production is reduced by power failures,

THEN CONTACT

AIR PLANT HIRE

7 The Grove, Coburg, N.13, Melbourne, Vic.

Phone FM 1686 and hire our portable air compressors, diesel or petrol-driven, together with pneumatic tools.

Rates on application.

CURRENT TENDERS — contd.

Grinding Media, 45 tons—
Forged Steel Balls (No. M.80).
Dec. 18.

Steam Driven, Direct Acting
Molten Pitch Pumps (three), (No.
M.31). Dec. 18.

DEPARTMENT OF SUPPLY
Aluminium Brass Tubing. Nov.
28.

Automatic Telegraph Equip.
Nov. 30.

Automatic Telegraph Equip-
ment. Nov. 30.

Gauges. Nov. 28.

Radio Plant and Equipment.
Dec. 19.

DEPARTMENT OF WORKS
AND HOUSING.

Aluminium Screen and Doors,
for Administrative Building, Can-
berra. Supply and fit. Nov. 23.

Automatic Fire Alarm, for
Automatic Telephone Exchange at
South Brisbane. Nov. 28.

Coal Handling Plant, for Hei-
delberg. Dec. 19.

Dust Extraction Ductwork, for
Heidelberg. Dec. 19.

Electrical Passenger Lifts (4),
and Electric Goods Lift, for Mel-
bourne. Dec. 12.

High Tension Underground
Cable and Joint Boxes, for Can-
berra. Nov. 28.

Hot Water Service, for Portsea.
Dec. 19.

Indoor Ring Main Units, for
Electricity Supply, Canberra. Dec.
5.

Kitchen Equipment (Spec. 356),
for Central South Australia. Dec.
5.

Low Tension Underground Cable
and Joint Boxes, for Canberra.
Nov. 28.

Mattress Disinfector, for Prin-
cess Juliana Hospital, Turrumurra.
Dec. 5.

Mild Steel Kiosk Shells (6), for
Electricity Supply, Canberra. Dec.
5.

Outdoor High Tension Switch-
gear, for Electricity Supply, Can-
berra. Dec. 5.

Positive Displacement Pumps,
for Parkville. Dec. 5.

Prime Movers and Low Load
Floats to Departmental Store,
Leichhardt. Dec. 5.

Refrigeration Plant, for Repat.
Hospital, Greenslopes. Nov. 28.

Salt Glazed Earthenware Pipes
and Fittings, for various States.
Nov. 28.

Steam Heated Hot Press, for
Cadets' Block, Duntroon. Nov. 28.

Stone Planing Machines (4), for
Stone Yard, Canberra. Dec. 12.

GOVERNMENT RAILWAYS
DEPARTMENT.

Diesel Electric Locomotives,
3 ft. 6 in. Jan. 9.

Horizontal Boring Machine.
Dec. 12.

Sleeping Cars. Dec. 12.

(Turn to page 84.)

Reinforced FISH-BAK

Waterproof WRAPPING



SAVES WRAPPING TIME & COSTS

Reinforced FISH-BAK is supplied in any size to suit your individual requirements, up to 72 inches wide, and in rolls 300 to 3,000 feet long.

Easy to handle. Easy to fold, it will be the answer to your packaging problems.

REAL PROTECTION FOR YOUR PRODUCTS

Reinforced FISH-BAK is made from two thicknesses of tough Kraft with Bitumen centre reinforced three ways with twine.

WATERPROOF AS A FISH'S BACK — Reinforced Fish-Bak is the ideal wrap for all goods requiring REAL PROTECTION against moisture and air, such as foodstuffs, chemicals, clothing, leather and commodities subject to loss through damp.

Manufactured by

**A. ABRAHAMS & SONS
PTY. LTD.**

320 YOUNG ST., FITZROY, VIC. JA 3114, JA 6074.

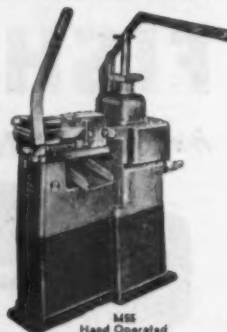
N.S.W. Branch: 27 McEVOY STREET, ALEXANDRIA



MSA Air Operated

DIECASTERS

FOR THOSE
SMALL
CASTINGS
6 to 7 oz.
Capacity
Zinc Base
Tin or Lead



MS Hand Operated

- HIGH PRODUCTION RATE
- LOW MAINTENANCE COST
- OPERATED BY UNSKILLED LABOUR
- QUICK DIE CHANGE AND SET-UP
- LOW CAPITAL COST
- LOW DIE COST
- LOW PRODUCTION COST

Manufactured by

METAL PRODUCTS PTY. LTD.

43-59 Sandgate Road, Albion, Brisbane
QUEENSLAND

UNDER LICENSE TO DIECASTING MACHINE TOOLS LTD., LONDON

Distributed by

NEW SOUTH WALES: Demco Machinery Co. Ltd., 243 Cleveland St., Redfern.
VICTORIA: James Forbes & Co., 69 Elizabeth St., Melbourne. WESTERN AUSTRALIA:
McLean Bros. & Nigg Ltd., Murray St., Perth. NEW ZEALAND: J. C. Riddell & Co.,
Box 12, Te Anau, Wellington.

Pioneers of Copper and Asbestos Gaskets in Australia



Gaskets made
for
Diesel Engines
Motor Cars
Tractors
Farm Engines
Motor Boats

Contractors
ARMY
NAVY
AIR FORCE

NO ORDER TOO
SMALL
NO ORDER TOO
LARGE

Copper and
Asbestos
RINGS
All Sizes
to
14½ inch outside
Metric and Inch
Measurements

SPECIALISTS in the manufacture of COPPER and ASBESTOS GASKETS
GASKETS also made in any other material

ENQUIRIES INVITED

Fully Approved by Civil and Aircraft Production Authorities

J. H. FARRER & CO. PTY. LTD.

ENGINEERS

67 Wellington Street, Collingwood, Melbourne, Victoria

ESTABLISHED 1931

Telephone: JA 4087

CURRENT TENDERS - contd.

STORES, SUPPLY AND TENDER BOARD.

- Clocks, Office, small, with or without alarm (Sch. C.T.B. 917). Nov. 30.
- Cotton Tape (Sch. C.T.B. 916). Dec. 19.
- Metal Paper Fasteners and Bulldog Clips (Sch. C.T.B. 918). Dec. 5.
- Towelling (Sch. C.T.B. 919). Nov. 30.

STATES

NEW SOUTH WALES

GOVERNMENT RAILWAYS DEPARTMENT.

Air Break Isolating Switches (241), Outdoor Manually and Power Operated; current ratings, 500-1,200 amperes at voltages 33 k.v. to 132 k.v. (Spec. 1270). Extended to Dec. 13.

Automatic Ash Skip Hoist and Horizontal Belt Ash Conveyors (2), for Utkimo Power Station (Spec. 1272). Jan. 17.

Axles, for Locomotives, Tenders and Carriages (Sch. 133). Dec. 31.

Bogie Louvred Vans (300). (Spec. 2211). Dec. 6.

Circulating Water Screening Plant, for Lake Macquarie Power Station (Spec. 1277). Dec. 20.

Coal Weighers, for Lake Macquarie Power House (Spec. 1247). Extended to Nov. 29.

Indicating and Recording Instruments, Summation and Remote Metering Protective Relays, Regulating and Rheostat Equipment, and Current Transformers, for Lake Macquarie Power Station (Spec. 1276). Dec. 13.

Multi-cylinder Compression Ignition Oil Engines, flat type (17), approx. 250 B.H.P., at 1,600 R.P.M., and Hydraulic Torque Converters (Spec. 2212). Dec. 4.

Overhead Wiring Equipment, for the Electrification of Railways Tracks, Jan. 24.

Roller Steel Tyres, for Locomotives, Tenders, Carriages and Waggon (Sch. 131). Dec. 31.

Sawdust, Annual Contract (Sch. 146). Dec. 31.

Truck Weighbridges, 35-ton (18), with platforms 16 ft long by 6 ft 6 in. wide, equipped with dial indicators and recording heads. Dec. 6.

Wood Planing and Moulding Machine (CE-1704). Dec. 12.

DEPARTMENT OF PUBLIC WORKS.

Altitude Control Valves (2), for Bourville and Nambucca Heads Water Supply. Nov. 27.

Bearing Extractor. Nov. 29.

Bolts and Nuts. Extended to Dec. 1.

Brake Lining Machine. Nov. 29.

Clamps (545). Nov. 29.

Connecting Rod Alignment Machine. Nov. 29.

Cylinder Burnisher. Nov. 29.

Domestic Hot Water, Central Hot Water Heating, Steam and

(Turn to page 85.)

JUST A PIECE OF TUBING



BUT IT CAN MEAN MORE PROFITS FOR YOU

Manufacturers and designers the world over are continually finding new and profitable uses for steel tubing. In the design of modern furniture, in the manufacture of such diverse articles as buses, fishing rods and refrigerators, steel tubing is playing an essential part. Perhaps in your own factory, processes could be simplified, your own or your client's products modernised, by the use of steel tubing in one of its many and varied forms. Williams, Dredge & Haydon will be pleased to help you with advice in this regard. They carry extensive stocks of solid-drawn weldless and electrically welded steel tubes.

WILLIAMS, DREDGE & HAYDON

PTY. LTD.
16-22 Foster Street, Sydney, MA 2227 & MA 3186

CHEMICAL TANKS, DRUMS, CONTAINERS

coated against Acids
and Alkalies

Articles of all Shapes and
sizes PLASTIC COATED

J. & F. BROCK BROS.

PTY. LTD.

STOVE ENAMELLERS
5 Inkerman Street, St. Kilda
Vic. Tel.: LA 1437.

PROTECT YOUR ELECTRIC MOTOR WITH THE EASY TO CONNECT **DERWENT** THERMAL OVERLOAD CUT-OUT

The Derwent Thermal Overload Cut-out is a heat protection device designed to protect A.C. Single Phase motors against overload burn-outs.

Immediately the load exceeds the safe limit, the "Derwent" cut-out automatically operates, cutting out the motor and saving it from damage. The cut-out is manually reset by simply pressing the "reset button." Maximum temperature attained by switch at 600% overload, is approximately equal to a locked rotor current of 900 deg. C.

Available from all electrical wholesalers in various sizes up to 5.1 amp. switch rating.

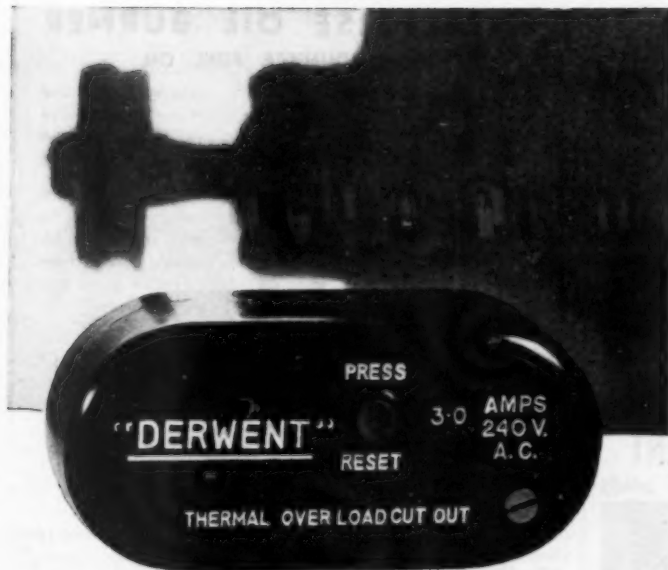
Australian and N.S.W. Factory Representatives:

DOMINION FACTORS PTY. LTD.

128 CASTLEREAGH STREET, SYDNEY. Phone: M 6507.

And at 218 MAITLAND ROAD, NEWCASTLE

Old. Rep.: T. H. Martin & Co., Wilson House, 35 Charlotte St., Bris
Victorian Rep.: A. E. Acland Pty. Ltd., 406-414 P.O. Pl., Melb



PRICE: 21/-, plus Sales Tax. All States.

CURRENT TENDERS — contd.

Condensate Services, for Wollongong District Hospital. Dec. 4.
Electric Portable Drills. — Nov. 29.

Electrically Driven Pumping Plant, for Walcha Water Supply. January 22.

Electrically-driven Bore, for Mendooran Water Supply. Jan. 15.
Filtration Plant—600 G.P.H. (505). Dec. 1.

Filtration Plant. Dec. 1.
Iron Machine—Two Roll, for Bathurst Teachers' College. Dec. 4.

Laundry Machinery, for Bathurst Teachers' College. Dec. 4.
Laundry Machinery, for Yass Hospital. Nov. 27.

Lightning Arresters (448). Extended to Nov. 29.

Lightning Arresters. Nov. 29.
Low - Pressure Refrigerating Plant, for Farrer Agricultural School. Dec. 4.

Low - Pressure Steam and Domestic Hot Water Systems, for Farrer Agricultural School. Nov. 27.

Low-Pressure Steam and Domestic Hot-water Systems, for Farrer Memorial Agricultural High School. Neringah. Dec. 4.

Low - Pressure Refrigeration Plant, for Farrer Memorial Agricultural High School. Neringah. Dec. 4.

Low-Pressure Steam Raising Plant, Steam Hot-water and Heat-

ing Systems, for Yass District Hospital. Nov. 27.

Micrometers. Nov. 29.
M.V.A. Transformers (2), 132/66/11 K.V., 27.5, No. E.4/50151, for Southern Electricity Supply. Extended to Dec. 11.

Pedestal Grinder. Nov. 29.
Portable Grinding Machines. Nov. 29.

Pumping Plant—Deep Well Type, Electrically Driven, for Cooma Water Supply. Dec. 13.

Pumping Plant—Bore Hole Type, Electrically Driven, for Mendooran Water Supply. Jan. 15.

Ring Spanners. Nov. 29.
Spark Plug Testing and Cleaning Machine. Nov. 29.
Structural Steel (579). Dec. 1.
Structural Steel (580). Dec. 1.
Valve Lifters. Nov. 29.
Water Meters (4), for Reticulations, for Nambucca Heads Water Supply. Nov. 27.

DEPARTMENT OF ROAD TRANSPORT AND TRAMWAYS.

Underground Cable, Multicore Steel Wired Armoured Jute, served and impregnated, for Elec-
(Turn to page 86.)



LYSAGHT'S

100% AUSTRALIAN MADE, FROM AUSTRALIAN MATERIAL

Specify "LYSAGHT'S" WIRE, WIRE NETTING, Etc.

WIRE Fencing and all other classes.	WIRE NETTING Black, Black Oxid and Galvanized.	HARD WIRE Iowa and Special (Long Distance).
WIRE NAILS Brads, Panel Pins, Cloths, Slaters' Nails, Staples.	ZINC OXIDE (Dry) All Grades.	

All the leading MERCHANTS, STOREKEEPERS and AGENTS sell our manufactures.

LYSAGHT BROS. & COMPANY PTY. LIMITED.

Registered Office and Works:
BLACKWALL PT. ROAD, FIVE DOCK, N.S.W.
City Office: 17 BRIDGE STREET, SYDNEY, N.S.W.



STACATRUC

Up to 2½ tons LOAD. 9, 12, 14 ft. LIFTS.

For IMMEDIATE inspection and demonstration contact your State Distributors:

N.S.W.: Frank J. Hodgson Pty. Ltd., 35-41 Reynolds Street, Balmain. (WB 2455)

Q.L.D.: Messrs. Alfred Snodgrass, Archer Pty. Ltd., 74-76 Eagle Street, Brisbane, B.I. (B 3728)

W.A.: Messrs. Wignomes Ltd., 613 Wellington Street, Perth. (BA 2281)

S.A.: Power Plant Ltd., 100 Currie Street, Adelaide. (Central 6632)

Sole Australian Representative:

LIBERTY MOTORS (AUST.) PTY. LTD.

Materials Handling Division,
121-7 Lanedale Street, Melbourne (JM 1993)



Brownbuilt
has a
new baby!
(30,000 sq. ft. area!)

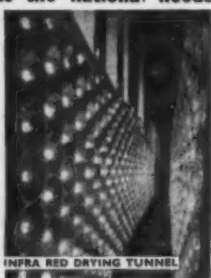
New Brownbuilt SYDNEY PLANT now in production further assists the national needs of Commerce and Industry

During September, the name of E. T. Brown Ltd., subsidiary — Forster's Products Pty. Ltd. — was changed to Brownbuilt (N.S.W.) Ltd. and incorporates Brownbuilt Steel Equipment Co. (N.S.W.) and the N.S.W. Enamelling Co. The Company Factory, at Ultimo, is now in full production. New plant and equipment have been installed on well-planned production line layouts right throughout the factory area of 30,000 square feet. The new Sydney Plant is just another example of Brownbuilt enterprise — to serve national needs and your needs more comprehensively than ever before.

Brownbuilt
(N.S.W.) LTD.

(Formerly Forster's Products Pty. Ltd.)
283 Bulwara Road, Ultimo Sydney

E. T. BROWN LTD., Brownbuilt Steel Equipment Co (REG), 14-24 Alexandra Pde., Clifton Hill, Victoria (JW 2115) N.S.W. Sales and Showroom: 17 Castlereagh Street, Sydney 4W52346 Representatives in all States



INFRA RED DRYING TUNNEL

CURRENT TENDERS — contd.

tromatic Traffic Signals (Spec. S-573). Extended to Dec. 4.

DEPARTMENT OF SUPPLY.
Aluminium Alloy Sheet Nov. 28.

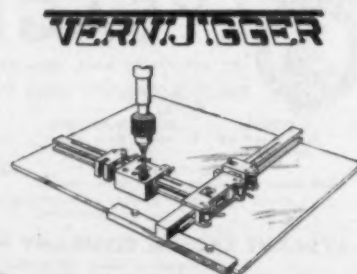
Electric Cable. Dec. 14.
Glycerine, 1,780 galls. Nov. 28.
Light Grey Full Gloss Paint. Nov. 28.

MARITIME SERVICES BOARD.
Electric Welding Machine (Portable), (Con. No. 50/51). Dec. 4.



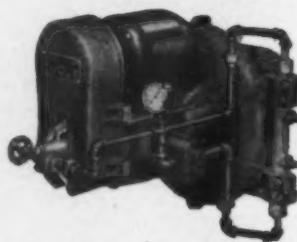
• At left:
3-JAW MACHINE VICE
In various sizes. Unequalled for awkward holding.

• At right:
VERNIJIGGER
With position vernier scales on sliding arms, enables a drilling machine to be used as a jig borer, to 5 thou. accuracy.



Further particulars for both these lines from: **H. S. G. WOLFE PTY. LTD.** 255a GEORGE STREET, SYDNEY

ENTERPRISE OIL BURNER BURNS BUNKER FUEL OIL



Semi-automatic and Manually controlled oil burners for all purposes.

Efficient, economical conversion of oil to heat engineered for reliable service from earlier pioneer developments.

MANUFACTURED BY

Automatic Heating Appliances Pty. Ltd.

41-43 PARK STREET, SOUTH MELBOURNE

Telephone: MX 3795

Marine type Multi-tubular Boiler, approx. 10 ft. dia. x 10 ft. long (Con. 50/33). Jan. 2.

Marine Type Compression Ignition Engine, for the Pilot Tender and Fire Float, Port Kembla (Con. 50/52). Dec. 4.

Marine Type, Multitubular Boiler, approx. 10 ft. dia. x 10 ft. long (Con. 50/53). Jan. 2.

Steel Roller Shutters (12), for new shed at Darling Harbour (Con. 50/48). Dec. 4.

Structural Steelwork, totalling 385.5 tons, for Shed at Pyrmont (Con. 50/42). Jan. 8.

METROPOLITAN WATER, SEWERAGE AND DRAINAGE BOARD.

Centrifugal-type Pumping Units, electrically-driven, for Bonnyrigs Pumping Station (Con. 2451). Dec. 12.

Mild Steel Plate, approx. 2 tons of each size, 1 in. 1/2 in., 1 in., 3/4 in., and 1 in. (Quot. 8287). Dec. 11.

Pneumatic-tyred Mobile Cranes (2), new or second-hand (P.T. 375). Nov. 28.

Vertical Spindle Centrifugal-type Sewage Pumping Units, electrically driven, for low level Pumping

Station, No. 119 (Con. 2945). Dec. 12.

STATE CONTRACTS CONTROL BOARD.

Spray Drying Plant. Nov. 28.

SYDNEY COUNTY COUNCIL.

Circuit Breaker Switching Equipment, low voltage, air or oil (Spec. 1456). Jan. 18.

Miscellaneous Piping, for Turbo Alternators at Pyrmont "B" Power Station (Spec. 1468). Extended to Jan. 18.

Supervisory Control Equipment, for City North Sub-station and City Sub-station (Spec. 1497). Jan. 18.

Turbine Blading, for Bunnerong "A" Power Station (Spec. 1490). Dec. 7.

MISCELLANEOUS.

Air Compressor and Accessories; Tractor, with end-loader—1 yd. cap.; Tractor, with 'doser' blade; Centrifugal pump; Circular saw; Mobile bitumen sprayer, for the Municipality of Woollahra. Nov. 27.

(Turn to page 87.)

"ROBLAN" INDUSTRIAL STOOLS



**STURDY
PRESSED STEEL
CONSTRUCTION**

PROMPT DELIVERIES

Manufactured and Distributed
by

Robertson & Lansley Pty. Ltd.

MOORE and WHITE STS.
LEICHHARDT, N.S.W.

Telephone: LM 1617

HARD CHROME PLATING for Building Up DIES, GAUGES, SHAFTS

Woodward & Thurston Pty. Ltd.

280 St. John's Road, CLEVE
SYDNEY, N.S.W.

Phone: MW 8671 (3 Lines).

ELEVATORS and CONVEYORS



GRAIN ELEVATOR BOOT
Capacity: 300 tons per hour

ROBERT BODINGTON Pty. Ltd.

Engineers

Queensberry and Leicester Streets,
Carlton, Melbourne, Victoria.
Established 1886

CURRENT TENDERS - contd.

Cases and Crates, Hydrogen Peroxide, Anhydrous Ammonia, Printed Bags and Wraps, Drums, Casks, Lubricating Oils, for Abattoir Dept. of Newcastle City Council. Nov. 27.

Hard Drawn Bare Copper Cable — 5 miles 7/064 H.D.B.C. Cable; 45 miles 7/080 H.D.B.C. Cable; 60 miles 7/104 H.D.B.C. Cable. Copper Cable shall be in accordance with Australian Standard Specification No. C41; 150,000 yards 7/944 P.V.C. Aerial Cable. P.V.C. Cable shall be in accordance with Australian Standard Specification; Watthour Meters (Bakelite Cases) and M.D.I.'s—3,000 only Single-phase, Two-wire 10/40 amp, 240V.; 200 only Two-phase, Three-wire, 10/40 amp, 240V.; 1,000 only Three-phase, Four-wire 10/40 amp, 240V.; 300 only 30 amp. M.D.I.; 200 only 60 amp. M.D.I.; 500 Street Light Fittings, 240V., complete with fuse box, hood, and E.S. holder, for Greater Wollongong City Council. Dec. 1.

Metal-Clad Switchgear, 11,000-volt. and L. T., for Clarence River County Council (Spec. 95/50). Dec. 20.

Motor Patrol Grader, approx. 20,000 lb. weight, having tandem drive, for Shire of Tembi. Dec. 7.

Outdoor Oil Circuit Breakers (11), 33,000 volt., for Newcastle City Council. Extended to Nov. 27.

Pumping Plant, deep-well type, electrically-driven, for Cooma Water Supply Augmentation (Spec. 120-49/50). Dec. 18.

Pumping Plant, electrically-driven Bare Hole Type, for Mendocorn Water Supply (Spec. 114-49/50). Jan. 15.

Switchboard, 11,000-volt., for Sutherland Shire Council. Nov. 27.

Rotary Plough, powered with Diesel Engine, together with Auxiliary Equipment, mounted on suitable truck type Prime Mover, for Snowy Mountains Hydro-Electric Authority. Dec. 12.

Stainless Steel Sheathed Overhead Pilot Cable, for Newcastle City Council. Dec. 4.

Standard Portable Suction Cleaner Equipment, for Blue Mountains City Council. Dec. 4.

Tractor, about 45-h.p., fitted with angle dozer, blade, cable, or hydraulic controls; one Patrol Grader, 18,000-22,000 lb. tandem drive, full power controls, leaning front wheels; one Mobile Crane, capacity 2 tons, capable of being readily converted as end loader; two 2-ton motor chassis, fitted with 3 cu. yd. tipping bodies, for Shire of Hornsby. Nov. 27.

Venturi Meter, for Water Supply Piping at Tomago (Con. 696). Hunter District Water Board. Dec. 12.

VICTORIA

GOVERNMENT RAILWAYS
DEPARTMENT.

Galvanised Iron Sheets (Con. 58,008). Nov. 29.

Fog Signals. Dec. 6.

(Turn to page 88.)

THE AUSTRALASIAN MANUFACTURER
[November 25, 1950, Page 87.]

BEAT WINTER FUEL SHORTAGES! "ELECTROMATIC"

Manufactured in Great Britain



FULLY AUTOMATIC OIL-FIRED COMBUSTION UNIT

Be independent of both solid and gas fuels! Act now! Install an "ELECTROMATIC" and enjoy an uninterrupted supply of steam from your boiler or heat from your furnace.

Additional working advantages of the "Electromatic"

- ① Automatic Combustion—No manual control necessary.
- ② Efficient, economical combustion—Low CO content in flue analysis.
- ③ Cleanliness—No dirt, dust, ash, soot. Clean, ship-shape boiler room.
- ④ Fuel easily procured—Oil readily available and pumped into your tanks.

Investigate the advantages of a completely automatic installation—It pays ... we'll PROVE it to you! Phone MA 7689 for service.

Distributed by

INDUSTRIAL CONTROL COMPANY OF AUST.

243 CASTLEREAGH STREET, SYDNEY. Phone: MA 7689, MA 3448.



"Reilax" Double-head Bottle Filler fitted with "Auto-Return"

Fills any size bottle to a pre-determined level without spill or waste; draws liquids from bulk containers at floor level. Average speed on 26oz. wines or spirits of 60 dots. per hour.

DISTRIBUTORS: E. W. Cox, 14 Wentworth Av., Sydney; W. H. Evans Ltd., Perth; Watson's Pty. Ltd., Sydney, Brisbane; Simpson Agencies Pty. Ltd., 51-54 Little Lonsdale St., Melbourne; Topp and Farmer, Kalbarra Chambers, James Place, Adelaide, S.A.

REILAX

BOTTLE FILLING EQUIPMENT

J.W. EARNSHAW Pty. Ltd.

189-195 Pacific Highway, North Sydney

Telephone XB 3950

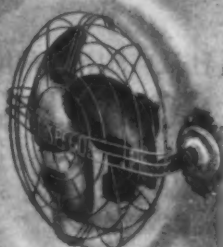
First by Comparison...

Modern in design... Quiet and efficient in operation... A model for every location... Economical performance...

A complete range of Air Circulators —

Standard, Adjustable Stem, Wall-Mount.

Short Stem, each available with fixed or variable speed — that will give long, efficient service in all types of premises.



The AIRSPEED method of construction ensures an Air Circulator which is without parallel, either in appearance, performance or QUIET and economical operation. AIRSPEED Air Circulators feature solid construction throughout: specially shaped blades of highly polished aluminium; stems and bases with black brocade enamel finish, infra-red baked for lasting wear; chromium-plated steel wire guards of pleasing design; pressed steel bases; motors of adequate power.

Available with either 24 or 30 inch diameter blades, moving up to 10,000 cubic feet of air a minute, AIRSPEED Air Circulators are the answer to your air movement problems. Consult your local electrical distributor today.

Airspeed

AIR CIRCULATORS

Full details of all AIRSPEED Ventilation Equipment available from your electrical wholesaler, retailer or the manufacturers
BRYANT BROS. PTY. LTD.

Herbert Street St. Leonards N.S.W. Tel. XF 1094
AIRSPEED AIR CIRCULATORS • EXHAUSTERS • MANCOOLERS

Canteen Managers

REFRIGERATION:

Our "JACK FROST" Universal 3-Door Cabinet has been specially designed for your food storage requirements.

Made in 3 standard sizes, 33, 51, and 68 cubic feet, with 3 temperatures in one cabinet, to give correct storage conditions for all kinds of food.

Send for our illustrated Bulletin K for full details.

Gordon Brothers Pty. Ltd.

129 Union Street,
BRUNSWICK, VIC.
Phone: FW 2167 (3 lines).

Lord Street and Edgeware Road,
ST. PETERS, N.S.W.
Phone: LA 5138 (3 lines).

"Superior Refrigerating Machines Since 1917"

CURRENT TENDERS — contd.

Gravel Haulast loaded into trucks at Stratford. Dec. 13.
Hoists (or Pullers), 1½ ton, lever and ratchet operated type. Nov. 29.

Manilla Rope Blocks. Nov. 29.
Portable Huts, 10 ft. x 8 ft. Dec. 20.
Shaping Machines. Dec. 20.

CITY OF MELBOURNE.
Air Circuit Breakers and Current Transformers (Spec. 740/E). Extended to Dec. 14.

Electric Passenger Lift and Electric Goods Lift, Supply of and removal of existing ones at Morton House (Spec. 744/E & 745/E). Dec. 4.

Street Lighting Lanterns (Spec. 735/E). Dec. 4.

DEPARTMENT OF PUBLIC WORKS.

Sector Type Spillway Gates (8), 26 ft. x 23 ft., for Somerset Dam. Nov. 27.

GRAIN ELEVATORS BOARD.
Overhead Crane Type Runways, Structural Steel supplied. Nov. 27.

MELBOURNE HARBOUR TRUST COMMISSION.
Mild Steel Reinforcing Rounds. Dec. 1.

MELBOURNE AND METROPOLITAN BOARD OF WORKS.

Hydraulically Operated Tilt and Angle Dozer Attachment to D.D.H. Tractor. Dec. 13.

Portable Air Compressors (6). Dec. 19.

MELBOURNE AND METROPOLITAN TRAMWAYS BOARD.
Prefabricated Structural Steel Workshops Building (2). (Tender 1608). Nov. 27.

POSTMASTER-GENERAL'S DEPARTMENT.

Bedding (Sch. V.424). Dec. 5.
Second-hand Valves and Sockets, Purchase of (Sch. V.423). Nov. 28.

STATE ELECTRICITY COMMISSION.

Bunker Discharge Dredgers and Brown Coal Bunkers (Spec. 50-51/148). Nov. 29.

Coal Crushing and Screening Plant (Spec. 50-51/153). Dec. 6.
Copper Conductors and Trolley Wire. Nov. 29.

Dial-type Milling Machines (Spec. 50-51/162). Nov. 29.

Heavy Duty Scrub Clearing Machine (Spec. 50-51/178). Dec. 20.

Horizontal Boring and Facing Machine. Nov. 29.

Lathes, for Maintenance Workshops (Spec. 50-51/173). Dec. 6.

Paper and Varnished Cambric Insulated Cable. Feb. 7.

Pneumatic Power Hammer (Spec. 50-51/163). Nov. 29.

Telephone Cable Loading Coil Assemblies (Spec. 50-51/174). Jan. 31.

Teletypewriter Machines (Spec. 50-51/119). Jan. 17.

Transformers and Spares (two), (Spec. 50-51/168). Feb. 7.

STATE RIVERS AND WATER SUPPLY COMMISSION.

Centrifugal Pumps (electric motor driven), for Eldon. Nov. 28.

Mobile 200 amp. D.C. Engine-driven Arc Welding Set, for Rocklands Dam. Nov. 28.

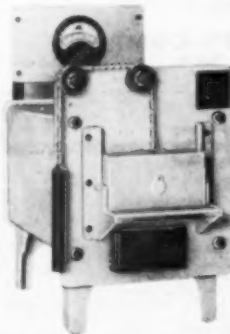
Well Point De-watering Equipment, for Heyfield. Dec. 12.

MISCELLANEOUS.

Spun Cast-Iron or Asbestos Cement Pressure Pipes; Valves; Cast-Iron Specials, for Municipality of Flinal. Dec. 16.

(Turn to page 89.)

"M & S" ELECTRIC FURNACES



Specially designed for laboratories and heat treatment of small quantities of metal parts. Adequate for all average engineering shop work. Performance fully guaranteed up to 1,000° C.

W. J. MILLS
187 NELSON STREET
ANNANDALE, N.S.W.

AUSTRALIAN BENTONITE

(COLLOIDAL CLAY)
AIR FLOATED

For Foundry Sands, Suspensions, Emulsions, Bonds Horticultural Sprays and Dusts, and Many Other Uses where High Gelling and Emulsifying ARE DESIRED.



Ready for Immediate Delivery.
Processed by

C. P. CURLEWIS & CO.
PTY. LTD.

Chemical Manufacturers
Mitchell Road, Alexandria, N.S.W.
Phone: LA 3258 (2 lines)

MAGNESIUM OXIDE

Pure Commercial 98.99%
2nd Grade 94.95%

Interstate Representatives:
RAMSAY & TREGANOWAN LTD.
Latrobe Street, MELBOURNE.
CAMPBELL BROS. PTY. LTD.
Bowen Hills, BRISBANE.

CURRENT TENDERS — contd.

QUEENSLAND

BRISBANE CITY COUNCIL.
Lightning Arresters (Con. E.24/1950). Dec. 15.
Porcelain Insulators and Hardware (Con. E.25/1950). Jan. 12.
Salt Glazed Ware Pipes and Fittings (Con. W79/1950). Dec. 22.

DEPARTMENT OF PUBLIC WORKS.

Overhead Travelling Crane, hand-operated, 15-ton, for Hydro-Electric Power House, Somerset Dam. Dec. 18.
Spillway Gates (8), Sector Type, 20 ft. x 23 ft., for Somerset Dam. Nov. 27.

IRRIGATION AND WATER SUPPLY COMMISSION.

Sanitary Air Compressors (2) only, 500 cu. ft. per minute. Dec. 8.

STATE ELECTRICITY COMMISSION.

Evaporator, for Boiler Feed Makeup (Spec. 250). Jan. 24.
Main Transformers, 132, 66, 22, 11 and 5.5 kV. (Spec. T/F.2). Dec. 13.
Oil-Engine-driven Electrical Generating Plant (Spec. 240). Dec. 6.
Switchgear: (132, 66, 22, 11 & 5 kV), Relays and Carrier Current Communication Equipment (Spec. T.F.3). Extended to Jan. 17.
Transformers, 3 phase and single phase (Spec. 241). Dec. 6.
Turbo-Alternators (2), water-driven, 11,000 V., 18,000 kW (Spec. T/F.1). Nov. 29.
Wood Burning Gas Producers (Spec. 247). Dec. 20.

STATE WORKS DEPARTMENT.

Steel Frame Windows, for Mental Hospital, Charters Towers. Dec. 6.

(Turn to page 76.)

Late Open Tenders

NEW SOUTH WALES

SYDNEY COUNTY COUNCIL.
Inter-Phone System, comprising Loud Speaking Master Station and eight Sub-stations, with all necessary accessories. Dec. 6.

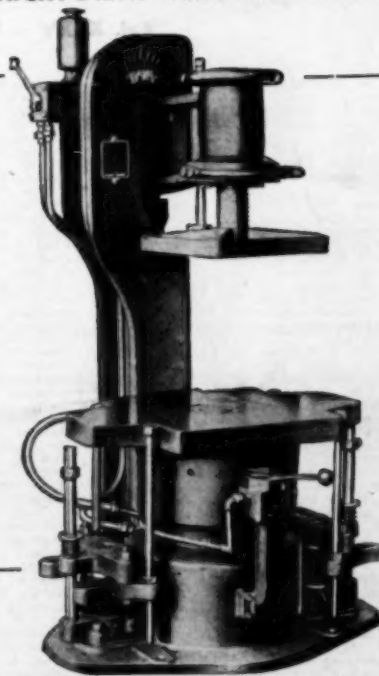
GOVERNMENT RAILWAYS DEPARTMENT.

Bore, 6 in., and Stroke Plunger Pump, 6 in. (C.E.-2408). Dec. 1.
Marshall Single-Cylinder. Nov. 29.
Open Face Pocket Watches (C.E.-6225). Dec. 5.
Hobey Single-cylinder, Purchase of. Nov. 29.
Ruston-Froctor Twin-Cylinder, Purchase of. Nov. 29.
Second-hand Portable Steam Engines, with Condensed Boilers, Purchase of. Nov. 29.
Sump Pump, Centrifugal Type (C.E.-2412). Dec. 4.

FOUNDRYMEN!

Increase Production
with this

PNEUMATIC JOLT-SQUEEZE
STRAIGHT-DRAW MACHINE TYPE H.P.L.



FULL RANGE
QUICK DELIVERY BY
**BRITISH MOULDING MACHINE
CO. LTD., ENGLAND**

Specialists in all types of
Moulding Machines

Contact Sole Australian Representatives:
C. EBELING & SONS PTY. LTD.
Castlemaine St., Yarraville, Melbourne

Phone: MW 2255

Telegrams: "EBELING," Melbourne

Send for free illustrated folder of complete range of
Moulding Machines

CEB:HP

	Page.		Page.		Page.
Abrahams, A. & Sons Pty. Ltd.	43	Earnshaw, J. W. Pty. Ltd.	87	Melbourne Wire Works	82
Acta Ltd.	40	East Asiatic Co. (Aust.) Pty. Ltd.	79	Metal Coatings Pty. Ltd.	84
Advance Tyres & Rubber Co. Pty. Ltd.	55	Ebeling, C. & Sons, Pty. Ltd.	88	Metal Products Pty. Ltd.	84
Actrol Equipment Pty. Ltd.	8	Eglington & Co. Ltd.	90	Miller Co.	89
Al Plant Hire	83	Electric Control & Eng. Ltd.	11	Miller, W. J.	84
Alpha Eng. Co. Pty. Ltd.	60	Edsall, E. & Sons Pty. Ltd.	74	Minerals Pty. Ltd.	65
Amplion (A'asia) Pty. Ltd.	55	Everitt, A. R.	50	Moffet-Virtue Ltd.	72
Andres, E. & Sons Pty. Ltd.	16	Eyevets Pty. Ltd.	9	Monsanto Chemicals (Aust.) Ltd.	48
Apemco	78	F. G. S. Products Pty. Ltd.	12	Morris, J. Eng. Co.	34
Austral Bronze Co. Pty. Ltd.	77	F. H. J. & Co. Pty. Ltd.	84	Moss, L. R. W. Pty. Ltd.	71
Austral Chain Co. Pty. Ltd.	74	Ferro Enamels (A.) Pty. Ltd.	92	Mote Ladders Pty. Ltd.	79
Austral Engineering Supplies Pty. Ltd.	77	Flavell, A. Pty. Ltd.	67	Munday, J. & Co.	80
Austral Metal Pressing Pty. Ltd.	78	Ford Motor Co. of A. Pty. Ltd.	68	Nonporite Pty. Ltd.	25
Austral Rock Milling Pty. Ltd.	39	Gadsden, J. Pty. Ltd.	46	Norris & Co.	40
Austral Tools Pty. Ltd.	20	Gardner, Waern & Co. Pty. Ltd.	81	O'Brien, O. H. (Sydney)	45
Australian Aluminium Co. Pty. Ltd.	21	Gosnoll, Battle & Co. Ltd.	15	Olympic Metal Industries	34
Australian General Electric Pty. Ltd.	27	Glendon & Co. Pty. Ltd.	45	Orimston Rubber Co. Pty. Ltd.	69
Automatic Engineering Appliances Pty. Ltd.	39	Goodwin, A. E. Ltd.	28	Patterson & Nicholson Ltd.	30
B. S. F. Electric Co.	39	Gordon Bros. Pty. Ltd.	89	Pearce & Co. Pty. Ltd.	94
BX Plastics Ltd.	51	Grant, R.	40	Perkins (Aust.) Pty. Ltd.	94
Ballarat Litho. & Printing Co. Pty. Ltd.	58	Greatrex, B. V. R. Pty. Ltd.	63	Philips Electrical Industries of A. Pty.	25
Bank of New South Wales	65	Griffith, Hassel & Griffith	75	Phillips, Ormonde, Le Platrier & Kelson	65, 68, 69
Barr, Walter, Pty. Ltd.	47	Grimwood Electrical Products Pty. Ltd.	62	Pioneer Spring Co. Ltd.	82
Barron, W. N. & Son Pty. Ltd.	42	Guthrie & Sons	23	Pope Products Ltd.	23
Beading Service, Co. of Aust. Pty. Ltd.	43	Harrison, S. Co. Pty. Ltd.	58	Protective Goggle Co.	74
Bentley, Elliott Ltd.	91	Hartford Fire Insurance Co.	58	Proud Bros. Pty. Ltd.	74
Bellco Pty. Ltd.	91	Hatrick, A. C. Pty. Ltd.	53	Purvis-Glover Eng. Pty. Ltd.	74
Bennett Chain Co. Pty. Ltd.	51	Headland, E. J. & Co.	77	Randle Photo Eng. Co. Pty. Ltd.	80
Birlec Limited	36	Healing, A. G. Ltd.	16	Raymond Hydraulic Transmission Co.	46
Black & Decker (A'asia) Pty. Ltd.	18	Heine, John & Son Pty. Ltd.	11	Raynors Pty. Ltd.	74
Blackley, H. & Co. (1910) Pty. Ltd.	27	Henderson, J. S. Plastics Pty. Ltd.	50	Red Point Tool Co.	37
Bodington, R. & Co. Pty. Ltd.	54	Henderson's Federal Spring Works Pty. Ltd.	70	Richardson, H. H. & Co.	38
Bromberg Automatics Pty. Ltd.	70	Hercules Steel Products Pty. Ltd.	41	Robertson & Lansley Pty. Ltd.	89
Brehaut, H. E. Pty. Ltd.	38	Herman, L. J. & Co.	31	Ronaldson Bros. & Tippett Ltd.	59
Brewer, W. H. Pty. Ltd.	35	Hobson Eng. Co.	70	Seamless Containers Pty. Ltd.	54
British General Electric Co. Pty. Ltd.	69	Holder, Stroud Pty. Ltd.	73	Selex Decal Pty. Ltd.	94
British Optical Co. Pty. Ltd.	69	Hughes, R. Pty. Ltd.	34	Sharp & Musgrave	2
Brock, J. & F. Bros. Pty. Ltd.	31	Hupac & Dewhurst Pty. Ltd.	35	Sherton, G. L.	57
Brown, E. T. Ltd.	96	Imperial Chemical Industries of Aust. & N.Z. Ltd.	79	Sidcot & Delomite of Aust. Pty. Ltd.	70
Bryant Bros. Pty. Ltd.	88	Industrial Control Co. of Aust.	87	Simmonds & Accessories Ltd.	8
Burdon, F. G.	40	Industrial Service Engineers Pty. Ltd.	27	Smith, A. Wallace	89
C. C. Engineering Industries Ltd.	98	John, M. B. Ltd.	24	Smith, Copeland & Co. Pty. Ltd.	92
C. R. M. Division of Lysaght's Works Pty. Ltd.	4	Johnson, C. H. R. Pty. Ltd.	49	Sneddon & Kingston	49
Carmichael, W. T. Ltd.	4	R. Jones & R. P. Pty. Ltd.	45	Sorteigraf Co.	78
Cast Fasteners Co. of Aust. Ltd.	3	Jones Bros. Corp. Pty. Ltd.	58	Steen, W. B. & Co. Ltd.	80
Carrier Air Conditioning Ltd.	56	Keeley, Wilson & Co.	35	Swift & Company Limited	80
Cartwright, O. F.	65	Kennett, L. T., Ladders Pty. Ltd.	80	Thomson Weaving	16
Caolin Pty. Ltd.	56	Kenworth (Aust.) Ltd.	81	Thomas Bros. & C. Pty. Ltd.	16
Castalloy Ltd.	42	Kismet Eng. Works	80	Thornthwaite, H. G. & Co. Pty. Ltd.	55
Central Motor Eng. Co. Pty. Ltd.	73	Kuono Co.	41	Torold Industrial Supplies Pty. Ltd.	14
Churchley, R. B. Pty. Ltd.	73	Kuo, Rosaly & Leale Pty. Ltd.	59	Trivelling, E. & Sons Ltd.	58
Cole, J. J. Pty. Ltd.	23	Lavis Office Machines Co.	31	W. & G. Record Processing Co. Pty. Ltd.	82
Colonial Sugar Refining Co. Ltd.	24	Liberty Motors (A.) Pty. Ltd.	85	Warman & Douglas	78
Commonwealth Moulding Pty. Ltd.	49	Lindberg Foster Display Pty. Ltd.	40	Warren & Brown Pty. Ltd.	77
Conaghan, Robert A. Pty. Ltd.	27	Liverpool Electric Cable Co. Ltd.	57	Welded Products Ltd.	62
Connolly, J. Ltd.	63	Ludowici, J. C. & Son Ltd.	96	Weiss, W. H. Pty. Ltd.	70
Corbett, R. Pty. Ltd.	7	Luke K.G. Pty. Ltd.	28	Wentworth, H. A. & Co. Ltd.	58
Court & Bevan	37	Lysaght Bros. & Co. Pty. Ltd.	85	Westate Tube & Eng. Co. Ltd.	58
Crescent Chemical Co. Pty. Ltd.	37	J. Magill, J. (A.) Pty. Ltd.	58	Weston's Pty. Ltd.	1

"ZYPFIT"

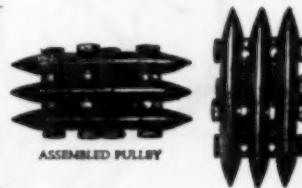
PATENT 119152/43

THE LATEST IN VEE PULLEYS

"A" "B" or "C" Section

ADAPTABLE

- One or more grooves, as required.
- Number of grooves can be easily increased or decreased.
- Speedy conversion from one section to another.



Stocks of Bosses in 3 sizes always on hand, the smaller bores having lighter Bosses. Supplied blank, or bored and keywayed.

Obtainable from your local dealer or from

ZYPFIT PULLEYS PTY. LTD.

RIVERSIDE AVENUE, SOUTH MELBOURNE, S.C.4.

'Phone: *MX 2251.

QUOTE REF. No. K/21

*Everything
under
Control*



There is no industrial problem too big for these precision snap action switches. They are already serving Australian industry in countless ways, such as in Plastic Moulding Presses, Electric Heaters, Welding Equipment, Textile Machinery, Paper Cutting Machines, Printing Presses, etc. Let us show you how they can help you! Burgess Micro-Switches have a movement differential from .0008in. to .006in., and are approved by the B.E.C. for operation at 250 volts A.C. up to 15 amps.

Using a **BURGESS MICRO-SWITCH!**

BELLCO

PTY. LTD.

Sales Office: 340 Queen Street, Melbourne FJ3611

Distributors:

SYDNEY: Bellco Pty. Ltd., 30 Carrington St.
ADELAIDE: Newton McLaren Ltd., Leigh St.

BRISBANE: Evans, Deakin & Co., Charlotte St.
PERTH: Horsburgh Bros. 931 Hay St.



FERRO ENAMELS (AUST.) PTY. LTD.

Parent Company: **FERRO ENAMEL CORPORATION**
CLEVELAND, OHIO, U.S.A.

Associated Companies in: **ENGLAND, HOLLAND, CANADA, FRANCE,**
BRASIL, ARGENTINE, MEXICO, SOUTH AFRICA.

WORLD LEADERS IN THE VITREOUS ENAMEL AND CERAMIC FIELDS

MANUFACTURERS IN AUSTRALIA OF:—

PORCELAIN ENAMEL FRITS AND POWDERS; COLOUR OXIDES
FOR THE ENAMELLING AND CERAMIC INDUSTRIES; POTTERY
CLAYS, CASTING SLIP, GLAZES, STAINS, Etc.

ENAMELLING SUPPLIES:—

PORCELAIN MILL BALLS; PORCELAIN MILL LININGS; METAL
CLEANERS; ASBESTOS GLOVES; ENAMELLING CLAY, Etc., Etc.

**ENGINEERS TO THE ENAMELLING AND
CERAMIC INDUSTRIES — YOUR EQUIPMENT
DESIGNED, SUPPLIED AND INSTALLED:—**

FURNACES; KILNS; CHARGING FORKS; BALL MILLS; DRIERS;
OIL BURNERS, BLOWERS, Etc., Etc.

27 BOURKE ROAD,
ALEXANDRIA, N.S.W. TEL. MX 1151

"Aberdeen"

CANVAS GOODS FOR INDUSTRY

Just as clothes protect a man, canvas protects
Australian Industry, and for over 56 years we
have been manufacturing all types of canvas
goods for industrial and domestic needs. We
are in a position to meet all your canvas
requirements, and if you have any special
problems or applications we will be glad to
help. Write or 'phone Industrial Dept., 33
Regent Street, Sydney.

- Tarpaulins
- Machinery Covers
- Welding Screens
- Canvas Curtains
- Conveyor Belts
- Chairs, Tables, Marquees, etc.,
for any functions can be hired.

WRITE, CALL OR PHONE

SMITH COPELAND & CO. PTY. LTD.

33 REGENT STREET, SYDNEY. TELEPHONES: M4181-2-3.

Makers of Finer Blinds and Canvas Goods for over 56 Years

INTERSTATE
REPRESENTATIVES:

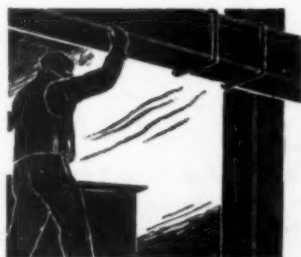
R. C. Kaderes,
Launceston, Tas.

J. Davidson & Co.,
Adelaide, S.A.

Gibbs, Bright & Co.,
Melbourne, Vic.

Parbury, Henty & Co. Pty.
Ltd., Brisbane, Qld.

A. J. Rigg & Sons,
Perth, W.A.



Steel

THOUSANDS
OF TONS

Continuous Regular Shipments

10 GAUGE TO 28 GAUGE SHEETS (Black or Enamelling)
ALSO DEEP DRAWING C.R.C.A.

Quantities of 10 tons or over are delivered ex-ships at capital cities. British Standard Specifications apply and inspection certificates are available with each shipment. Prices are reasonable.

Steel of the finest quality for almost universal application is available in continuous regular shipments. We can quote all sizes of Reinforcing Rods, Flats, Rounds, Angles, Channels, Plates, Steel Tubing, R.S.J.'s, Galvanised Iron Sheets, Water and Gas Pipes, Wire Netting, Conduit and Wire of all kinds. Available in True British Dimensions.

EMM. YANNOULATOS (OVERSEAS)
PTY. LTD.

28 Martin Place, Sydney

Telephones: BW 2941-2-3

Telegrams: "YANNOULATOS," Sydney



IRC All Metal Rheostats are another outstanding development by the world's leading makers of quality resistance products. They are YOUR key to the utmost in rheostat efficiency, whatever the application.

Types: FR 25-25 watts
FR 50-50 watts

These compact Rheostats are particularly suitable for speed controls of fractional horse-power motors, and for all applications where rotary resistances of small dimensions are essential. Housed in ribbed die-cast aluminium alloy, their unique design offers exceptionally efficient heat radiation. They will dissipate the full rated wattage with only 25% of the winding active for an additional temperature rise of only 10° C.

POWER RHEOSTATS

SOLE AGENTS FOR AUSTRALIA

Wm. J. McLellan & Co. Pty. Ltd.

BRADBURY HOUSE, 55 YORK STREET, SYDNEY. Phone: BX 2508



SPECIAL ALLOY & TOOL STEELS

Manufactured in England by William Jessop & Sons Ltd., Sheffield, and distributed in Australia by Perkins (Aust.) Pty. Ltd. Among the Steels supplied are those below:

- Carbon Tool Steels
- Alloy Tool Steel
- High Speed Tool Steels
- Hot Work Steels
- Constructional Steels
- Case-hardening Steels
- Valve Steels
- Heat-resisting Steels
- Corrosion-resisting and Stainless Steels
- All Steels for Pressure Die Casting

PERKINS (AUST.) PTY. LTD.

BOWDEN STREET, ALEXANDRIA, N.S.W. MX 1191.

BRANCHES AND REPRESENTATIVES IN ALL STATES

FOR DECORATING & BRANDING

SELEX DECAL

TRANSFERS

THE FAMOUS SELEX DECALS ARE UNEQUALLED FOR BRILLIANT COLOUR AND DURABILITY ON WOOD, METAL, PLASTICS, RUBBER, LEATHER AND GLASS

SELEX DECAL PTY. LTD.

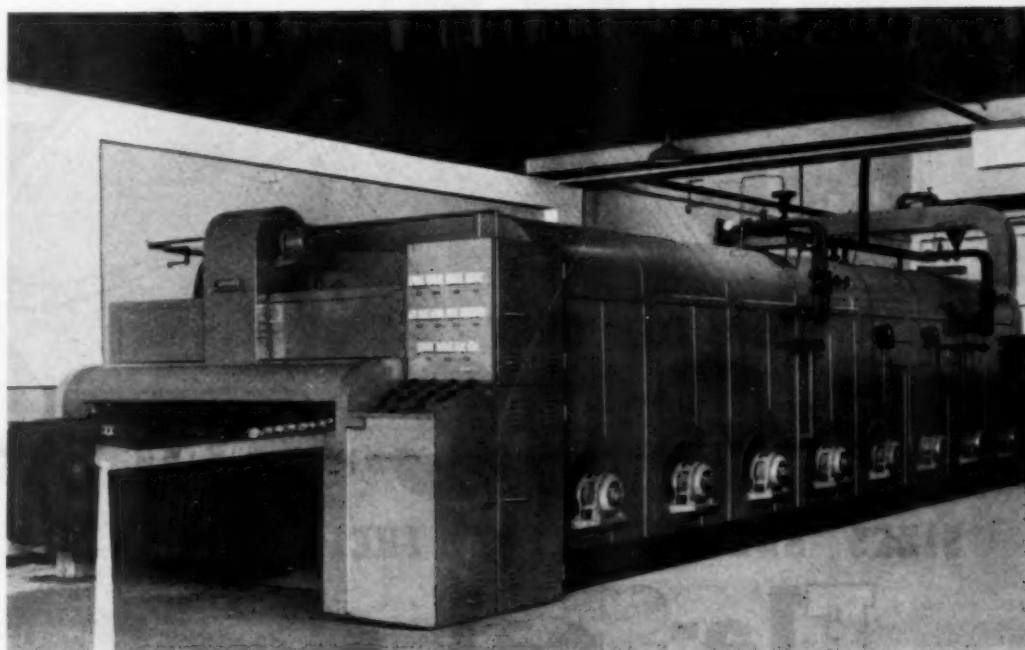
OFFICES IN ALL AUSTRALIAN CAPITAL CITIES

Technical Associates: Canada Dezalcomania Co. Toronto and The Meyercord Co. Chicago

Hurricane-
FORCED AIR HEATING.

Australia's Leading Industrial Drying Engineers have pleasure in announcing another outstanding achievement to add to their long list of Baking and Drying Installations

WOOLLEN HANK DRYER



TRAVELLING POLE TYPE HANK DRYER. CAPACITY: 1,000 LB. DRIED HANKS PER HOUR.

SAVE FLOOR SPACE, LABOUR AND STEAM

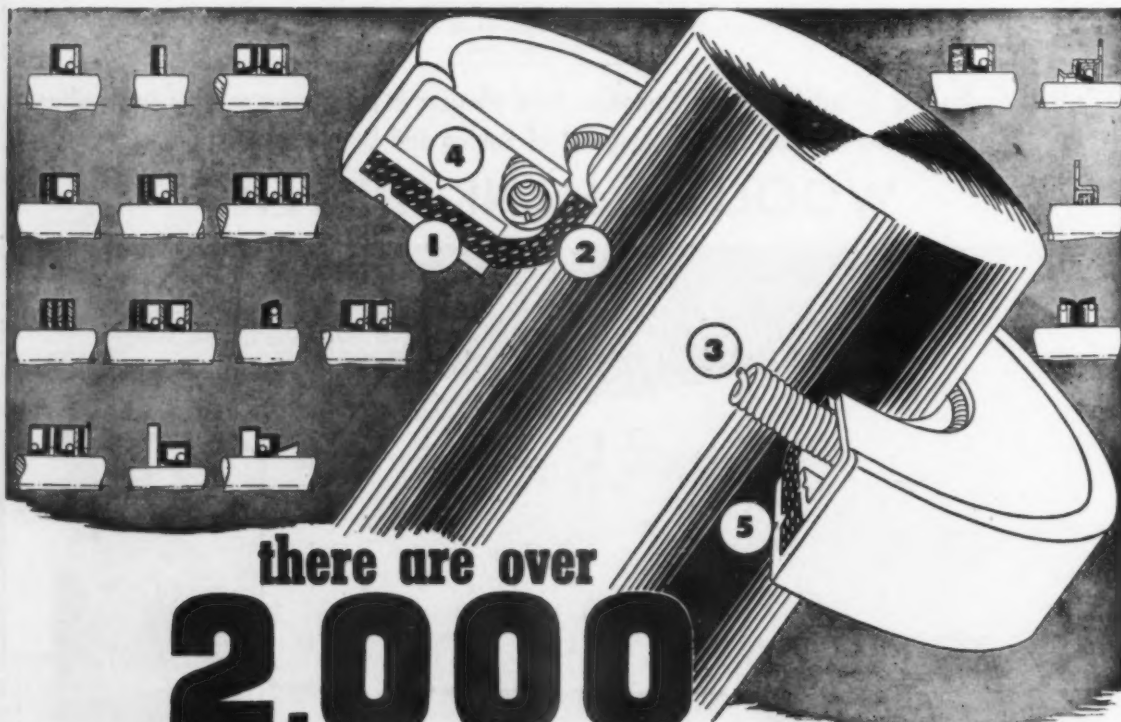
- The "Hurricane" Dryer produces more poundage per unit of holding capacity than competitive machines. 1,000 pounds of dried wool stock in 34 lineal feet of conveyor.
- Low cost drying averages 1.3 pounds of steam per pound of moisture evaporated.
- Mechanical features include: Heavy Duty Steel Extended Surface Steam Heaters with Air-filters, Variable Speed Drive, Anti-friction Bearings, Planned Lubrication, Light Fabricated Stainless Steel Poles.
- High efficiency due to high velocity air being forced through the moving bed of stock. The air does not pass over the surface of the stock as in some other types. Hence high production rate and saving in factory floor space.
- Superior quality of dried stock to that obtained from older machines because the stock is subjected to the heat for a shorter period of time. The air system is scientifically based on the correct theory of drying. Cool, conditioned air is first applied to the dry leaving stock, and hot moist air is only applied to the wet entering stock.

This principle ensures economical drying with improved lustre, handle and uniformity.

TWELVE MONTHS' GUARANTEE WITH EVERY INSTALLATION

WESSBERG & TULANDER PTY. LTD., *Industrial Drying Engineers*

140-144 QUEEN STREET, ALEXANDRIA, N.S.W. Phones : MX 1241, MX 1552



there are over
2,000
SIZES AND TYPES* OF THE
Fla-Seal
OIL AND GREASE RETAINER

* The Fla-Seal Oil and Grease Retainer is constructed on sound and proven engineering principles to standard pre-determined tolerances in over 2,000 sizes and types for every industrial application. Fla-Seal provides a perfect bearing seal, preventing leakage of the lubricant from the bearing and the passage of foreign matter into the bearing.

J. C. Ludowici & Son Ltd. offer a free technical service on the selection and application of Fla-Seals to operate efficiently under all normal and adverse conditions.

Literature and Price List available without obligation.

Joint Manufacturers: J. C. LUDOWICI & SON LTD., & A. FLAVELL PTY. LTD.

- 1 The sealing member of the Fla-Seal is moulded under high pressure from Luton leather specially tanned and treated for oil retainer requirements.
- 2 The sealing lip of the leather is uniformly smooth and accurately finished, ensuring good sealing properties with low spring tension.
- 3 The tension spring, having the capacity to retain its elasticity for almost an indefinite period, holds the leather sealing lip against the shaft, preventing the escape of lubricant and automatically adjusting the seal for wear.
- 4 The leather seal is prevented from rotating in the casing by projections stamped into the metal case and washer which securely hold the leather in position.
- 5 The dimensions of the seal, inside, outside, and depth, are all carefully checked to conform to permissible limits of accuracy.

WHOLESALE FACTORY SELLING AGENTS:

J. C. LUDOWICI & SON LTD.

117 YORK STREET, SYDNEY. BX 8641. 20-26 QUEEN'S BRIDGE STREET, STH. MELBOURNE, M 3101-3.



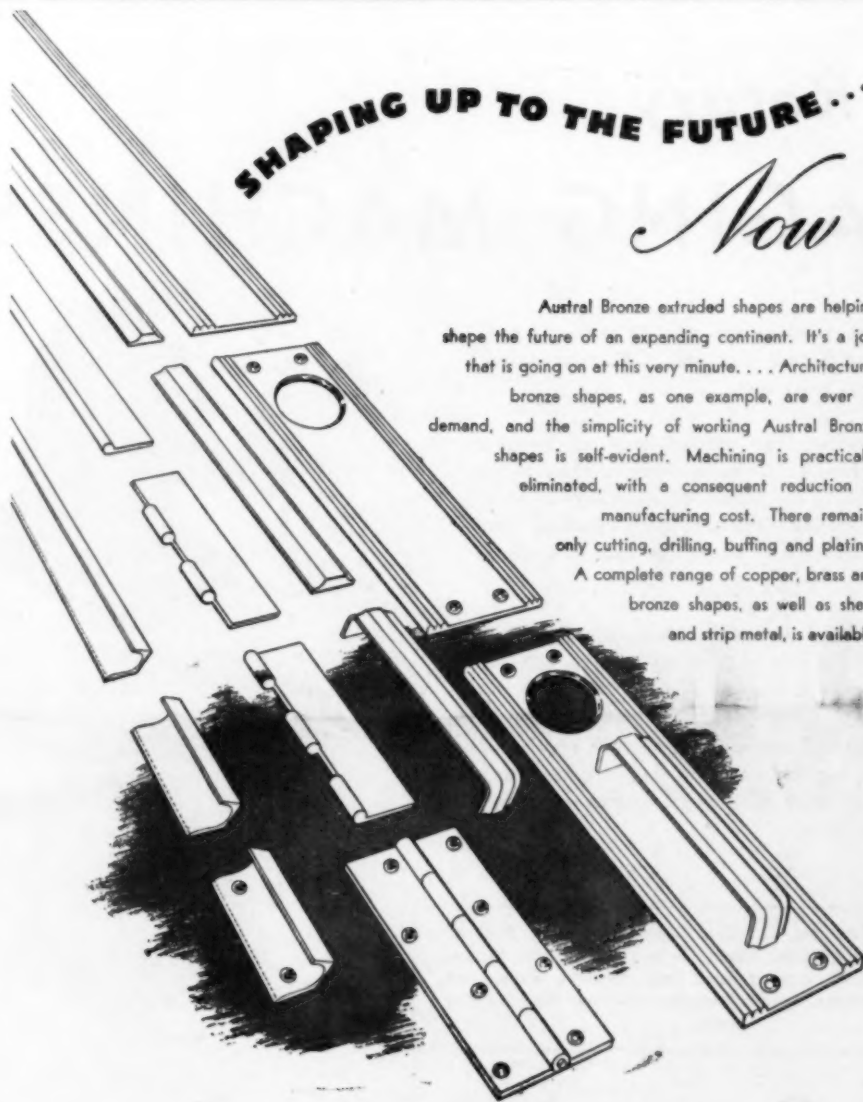
OTHER LUDOWICI LINES OF EQUIPMENT INCLUDE:- Leather and Rubber Belting, Conveyors and Elevator Belting, Round Leather Belting, Textile Leathers, Belting Accessories, Leather Packings, High-Speed Grinder Belts, V Belt Drives, Industrial Clutches, Plain Bearings, Anti-Friction Bearings, Steel Shafting, Shafting Couplings, Shafting Hangers, Milled Bearing Metals, Porous Bronze Bushes, Gears, Pulleys, Wall Brackets, Variable Speed Drives, Ludowici Pivot Drives, Fla-Seal Oil Retainers, Composite Packings, Luton Industrial Plastics, Industrial Gloves, Rubber Hose, Lamcol Trucks, Wheels, Castors, etc., Ferry Chain Drives, D. C. Silicons.



SHAPING UP TO THE FUTURE...

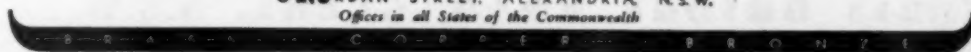
Now

Austral Bronze extruded shapes are helping shape the future of an expanding continent. It's a job that is going on at this very minute. . . . Architectural bronze shapes, as one example, are ever in demand, and the simplicity of working Austral Bronze shapes is self-evident. Machining is practically eliminated, with a consequent reduction in manufacturing cost. There remains only cutting, drilling, buffing and plating. A complete range of copper, brass and bronze shapes, as well as sheet and strip metal, is available.



AUSTRAL  BRONZE
COMPANY PTY. LIMITED

O'BRIEN STREET, ALEXANDRIA, N.S.W.
Offices in all States of the Commonwealth



C.C. Rotary SWAGING MACHINES

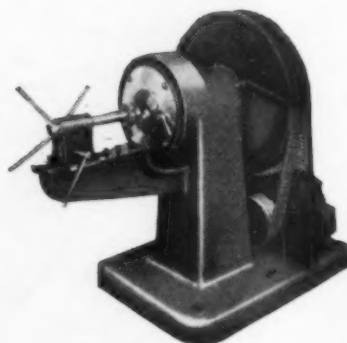
for reducing, tapering and pointing steel and non-ferrous rod, tube and wire, etc. C.C. means larger production at lower costs.

Here we feature two of our range of Swaging Machines. Model "A" has a capacity of up to $\frac{1}{2}$ inch O.D. Tubing and Model "B" a capacity of up to 2 inch O.D. Tubing. The drive is by Vee Belts from an Electric Motor mounted on the base to a robust flywheel.

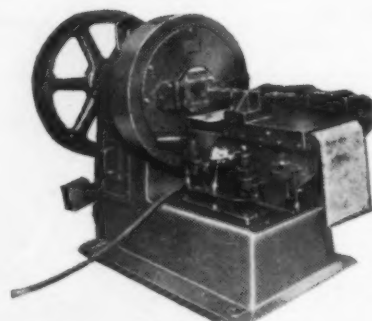
The lubrication of the Dies, Rollers and Main Shaft is supplied by a built-in Oil Pump, with an efficient filter system which is easily cleaned.

We can supply Swaging Machines with or without vise for feeding the work into the work head, and in the case of larger machines the feeding mechanism can be pneumatic.

Other C.C. Products include: Trabon Lubricating Systems, Tool and Cutter Grinders, Hydraulic Presses, Lathe Chucks, Arbor Presses, Printers Saw Benches, Logging Saws, Drop Hammers, Gauges, Ice Cream Cone Machines, Duncan Strapping Machines, Eye Protection Shields.



Model "A"



Model "B"

Telephone :
MW 2757
(4 lines)

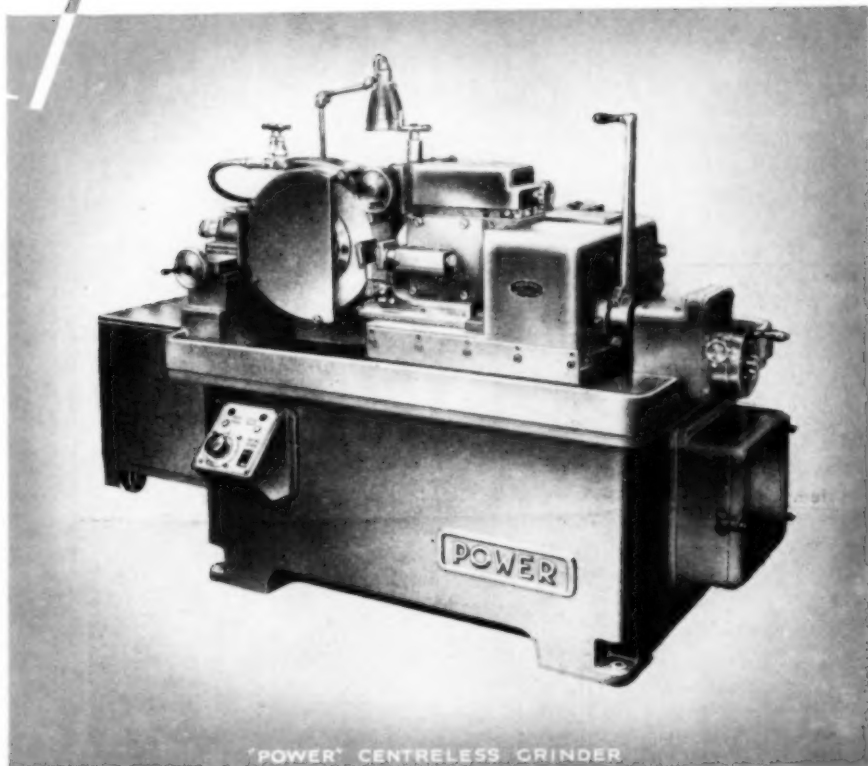


ENGINEERING
INDUSTRIES Ltd.

Telegrams :
"TOOLENGCO,"
Sydney

213 BRIDGE ROAD, GLEBE, N.S.W.

*P*recision! by "POWER"



"POWER" CENTRELESS GRINDER



PAUER & CO. PTY. LTD.
MAKERS OF MACHINE TOOLS

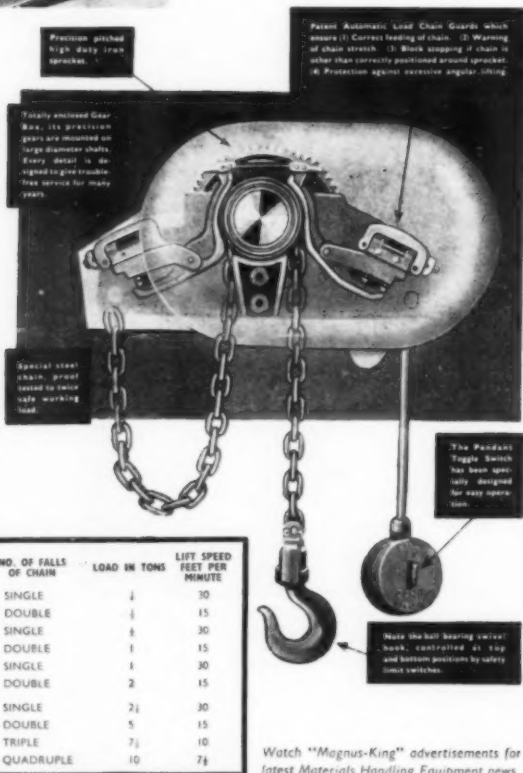
8-12 VALE ST., NORTH MELBOURNE (AUST.)

TELEGRAMS: "POWERGRIND" MELBOURNE

Lift it **ELECTRICALLY** by **MAGNUS·KING**

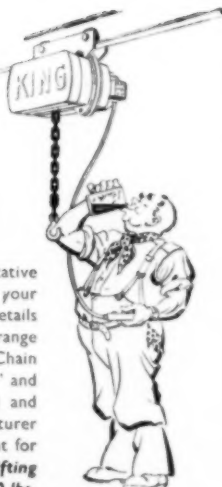


At left is shown two types of "King" track used—"Double-head" Track, ideal for light loads; and "Supertrack" for moderate loads. Below is a "King" Electric Chain Block cutaway to show some of the outstanding features for which it is renowned.



Watch "Magnus-King" advertisements for latest Materials Handling Equipment news.

Ask a Magnus-King representative to call—without obligation on your part—to furnish you with all details of the NEW DESIGN "King" range of compact, balanced Electric Chain Blocks—"MyTeMin", "Marvex" and "Mammoth" models—designed and built by Europe's largest manufacturer of Materials Handling Equipment for the **efficient and reliable lifting and shifting of loads FROM 200 lbs. TO 10 TONS** . . . "King" Electric Chain Blocks embody many features you should know about—**exclusive features** that guarantee maximum safety, long trouble-free life, and outstanding heavy-duty service . . . Each capacity and type may be equipped with Push Type, Hand-Geared or Power Trolleys as required.



AVAILABLE FROM STOCK AND EARLY DELIVERY!

Magnus Industrial Equipment Pty. Ltd., are Sole Australian Distributors and Manufacturers for Geo. W. King Ltd., of England. Some "King" equipment continues to be imported, but a number of their products are being manufactured by "Magnus", under licence.

"KING" ELECTRIC CHAIN BLOCKS— $\frac{1}{2}$ TO 10 TONS

"MAGNUS-KING" OVERHEAD TRAVELLING, WHARF, AND GANTRY CRANE, —UP TO 120 TONS

"MAGNUS-KING" CONVEYORS OF ALL TYPES

"MAGNUS-KING" MONORAIL, SUPERTRACK, TROLLEYS, SWITCHES, CABLE REELS AND "SAFELEC" BUSBARS

★ **MAGNUS — ALSO MANUFACTURERS OF ALL TYPES OF CONVEYORS AND MATERIALS HANDLING EQUIPMENT.**

MAGNUS INDUSTRIAL EQUIPMENT PTY. LTD.

768 COLLINS STREET, MELBOURNE. TELEPHONE MU 6957 (2 lines).

SPECIALISTS IN MATERIALS HANDLING EQUIPMENT — CONVEYING AND ELEVATING ENGINEERS.

NEW SOUTH WALES
Magnus Industrial Equipment Pty. Ltd.
1 Urwin's Bridge Rd., ST. PETERS
Phone: LA 3329

SOUTH AUSTRALIA
PASCOE & CO. LTD.
262 Port Rd., WOODVILLE
Phone: M 7127

QUEENSLAND
Bourke & Radford
129 Adelaide St., BRISBANE
Phone: 6 3070

M14 AM (R)